RAILWAY AGE

Improvement in Railway Traffic and Earnings

Did general business improve more than seasonally in September and October, and then improve less than seasonally in November? There is a widespread belief that this is what occurred, but statistics of railway car loadings, which are the best single measure of the total volume of production and commerce, show that relatively the improvement was about as marked during November as the preceding two months. The figures given in the accompanying table show the trend of car loadings since July, 1932, as compared with the trends during the corresponding parts of 1930 and 1931, and also during the corresponding parts of the five years ending with 1929.

In the five years ending with 1929 weekly loadings in August averaged 8.5 per cent more than in July, while in 1932 they averaged only 7.8 per cent more in August than in July. In September of the five prosperous years ending with 1929 they averaged 10.8 per cent more than in July, while in September, 1932, they averaged 17.4 per cent more than in July. These figures show that a marked improvement in the trend of loadings began in September, and, of course, indicate a corresponding improvement in the trend of general business. In the five prosperous years loadings in October averaged 13.7 per cent more than in July, while in October, 1932, they averaged 32.2 per cent more than in July. In the five prosperous years weekly loadings in November averaged 1.2 per cent *less* than in July, while in 1932 they averaged 14.8 per cent *more* than in July.

Increase in Average Weekly Car Loadings

Month	1932 Average per Week	1932 Percent Inc. or Dec. over July	1931 Percent Inc. or Dec. over July	1930 Percent Inc. or Dec. over July	5 Years 1925-'29 Percent Inc. or Dec. over July
July	477,862				
August	515,153	+7.8	+2.3	+5.1	+8.5
September	561,150	+17.4	–0.8	+4.8	+10.8
October	631,621	+32.2	+4.1	+6.9	+13.7
November	548,802	+14.8	–10.6	–10.2	–1.2

Comparisons of the figures for the fall months of 1932 with those for the fall months of 1930 and 1931 illustrate with equal force the favorable trend of car loadings that has prevailed since August, 1932. In November, 1930 and 1931, loadings averaged over 10 per cent less in November than in July, while, as already stated, in November, 1932, they averaged almost 15 per cent more than in July.

Favorable Effects on Net Operating Income

The effects produced by the increase in freight traffic upon the net operating income earned by the Class I railways have been remarkable. Their net operating income in the first eight months of this year was only $152,300,000, or about $19,000,000 a month. In September it was $49,647,000, and in October, $63,840,000. The net operating income earned in these two months was three-fourths as great as that earned in the preceding eight months, and accounts for almost 43 per cent of all the net operating income earned in the first ten months of the year. Even in October, however, the return earned was at an annual rate of less than 1.9 per cent on property investment, and earnings in the first ten months were at the annual rate of only 1.16 per cent.

The very substantial increase in net operating income in September and October occurred because, although traffic increased, operating expenses continued to be rigorously controlled. Gross earnings in October, for example, were $466,500,000 greater than in August, while operating expenses were only $10,400,000 greater. With gross earnings almost 18 per cent less in October, 1932, than in October, 1931, but with operating expenses 23.4 per cent less, the net operating income earned in the two months was almost the same.

The railways of all the three large territories—eastern, southern and western—have participated in the improvement in freight business and in the resulting increase in net operating income. Operating expenses had been cut to the bone when it began and in all three districts most of the increase in gross earnings

was converted into net earnings. In the first eight months of the year the net operating income earned by the eastern lines averaged $15,000,000 a month. In September it increased to $25,228,000, and in October to $33,355,000, and in the latter month exceeded by $2,500,000 the net earned in October, 1931. The net operating income earned by the southern group of roads averaged only $916,324 in the first eight months of the year. In September it increased to $4,243,000, and in October to $5,571,000, and in the two months was almost twice as great as in the corresponding two months of the 1931. The net operating income of the western lines in the first eight months of the year averaged $3,117,000 monthly. In September it increased to $20,176,000, and in October to $24,914,000, but in neither month did it equal what was earned in 1931.

Will Improvement Continue?

An upward trend of freight business in the last one-third of a year almost always has been the forerunner of improvement during the first half of the following year. Freight business is still very small compared with what it was in the years of prosperity. Average weekly car loadings in October and November in the five years ending with 1929 were almost 1,066,000, while average loadings in October and November, 1932, were only 590,200 cars, or almost 45 per cent less. As recently as August, however, they were almost 53 per cent less than in the five years ending with 1929. The railways greatly need to increase their expenditures for maintenance and new equipment, and they cannot increase their expenditures for maintenance much and continue to show such increases in their net as they made in September and October, and probably in November. The much more than seasonal increases in traffic that have occurred during the last three months, and the consequent increases of net operating income, are, however, highly encouraging, especially when compared with the steady downward trend of traffic and net return that prevailed without a break throughout the 35 months from October 1, 1929, to September 1, 1932.

A Future Trend in Rolling Stock

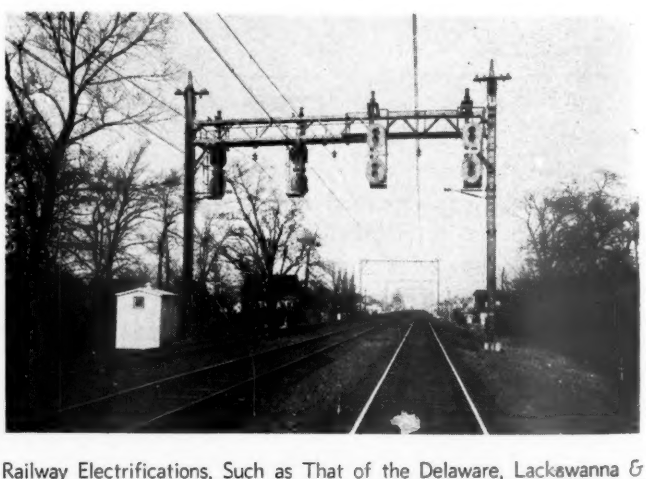
The picture of the railroad of the future, which is visualized by J. R. Turney, vice-president of the St. Louis Southwestern in an article elsewhere in this issue, is most encouraging for those concerned with the improvement and development of rolling stock to meet modern service requirements. The picture is of the railway stripped to its essentials, in which the cheapest form of land mass movement by the use of mechanical power on highways of steel has been relieved of a large part of the present burdensome terminal expenses by the utilization of the motor truck and the highway for collection and delivery service of carload, as well as l.c.l., traffic.

After four or five months' experience in the store-door delivery of carload traffic by truck, the saving per diem alone has been found to equal the delivery cost. Such a saving in car time may go far toward offsetting the tendency to decrease the efficiency of utilization likely to be caused by the development of special types of cars better adapted to certain types of lading than the present box car. The marked improvement in the intensity of freight-car utilization implied by the close co-ordination of road and rail service extends the economic limitations on refinements in equipment construction needed to permit the movement of long trains without shocks destructive to the lading. Furthermore, the ultimate use of demountable bodies of some type adapted to the handling of l.c.l. and a considerable portion of present carload traffic are in themselves adapted to a highly efficient utilization of rolling stock.

Present trends indicate the end of the simplification of rolling stock into a few standardized types. The need for smaller shipping units favors the use of demountable containers for some classes of traffic, but this cannot replace the box car in the case of others, such as grain, and the open-top car has no rival in its field. The field for special types adapted to the efficient handling of specific commodities is constantly growing.

While in the technique of its operation the railroad will always be a highly specialized industry, in its service it must become more and more a closely integrated part of the industries it serves. The adaptation of rolling stock to fit the material-handling requirements of some industries offers possibilities for the reduction in the costs of these industries, entirely outside the rates for transportation service, which, in many cases, may be the factors which determine whether the transportation shall be by road or rail.

* * *



Railway Electrifications, Such as That of the Delaware, Lackawanna & Western in Northern New Jersey, Are Increasing Property Values and Making Suburban Life More Attractive

Railways Propose Legislative Program

Plan for equality of opportunity in transportation service laid before Coolidge committee

A SPECIFIC legislative program proposing a relaxation of some of the existing regulation imposed upon the rail carriers, in view of the rapid development of competitive forms of transportation, and the application of regulatory provisions similar to those to be applied to railroads to the new forms of transportation that have entered the same field of service, is proposed by the Association of Railway Executives in a brief filed with the National Transportation Committee.

Nature of the Statement

A statement emphasizing the gravity of the situation now confronting the railroads, their investors, and the public, and the pressing need for relief from their difficulties, was presented before the committee, of which former President Calvin Coolidge is chairman, at New York on December 8, by Alfred P. Thom, general counsel of the association, together with specific recommendations representing what, in the judgment of the railway executives, is necessary to promote equality of opportunity in the transportation service. He also outlined a more brief program on which they desire action at the present short session of Congress.

The statement also emphasized "the gravity of the problem" confronting the railways and their investors and the public "in what they believe is the serious maladjustment of railroad wages," saying "they regard the present level of railroad wages as unjustified and profoundly injurious to the public interest."

A summary issued by the association includes the following:

Recommendations

1. Amendment of Reconstruction Finance Corporation Act to permit loans to railroads upon certificate of the Interstate Commerce Commission that a proposed loan is, in its judgment, adequately secured or that the past record of earnings of that carrier and its prospect for future earnings furnish reasonable assurance of the applicant's ability to repay the loan within the time fixed.

2. Repeal of recapture provisions of Section 15a of the Interstate Commerce Act, which requires a railroad to give the government one-half of its earnings above six per cent.

3. Federal and state regulation of commercial vehicles operating over the public highways.

4. Federal government should retire from barge operation on the inland waterways in competition with the railroads and the railroads should be permitted to operate on the water, including service through the Panama canal.

5. Railroads should be relieved from oppressive taxation, and government subsidies to various other agencies of transportation in competition with the rail carriers should be discontinued.

6. Enactment of federal legislation as to railway consolidations or unifications, to encourage voluntary consolidation under proper supervision.

7. Relaxation of existing regulations of the railroads in order to enable them more nearly to meet the competition of other agencies of transportation, and application of similar regulations so far as applicable to these new forms of transportation to bring about equality of opportunity.

The Situation

1. Railroads are the backbone of the transportation industry in the United States and are essential for our economic welfare and our national defense. Their financial integrity involves the financial integrity of our fundamental fiduciary institutions, such as savings banks, insurance companies, universities, colleges and hospitals to the extent of their holdings of more than six and one-half billions of dollars of railway bonds. Railroad expenditures for labor, materials and supplies and improvements in normal times involve nearly five billions of dollars annually.

2. The rail carriers have never in any single year earned the fair return set up in the Transportation Act, 1920. With the onset of the depression, and the rise of competition from other forms of transportation, their revenues have been greatly depleted. In the first eight months of 1931, a year of depression, 45.7 per cent of the Class I railway mileage earned less than fixed charges by over $74,000,000, while in the corresponding eight months of 1932, after revenues from emergency rates had been deducted, 87.5 per cent failed to earn fixed charges by over $255,300,000. Obviously, necessity for relief from this situation is most pressing in the public interest.

3. Due to large capital improvements and improved operating methods, efficiency and economy in railroad operation has reached the highest level in railroad history.

4. As a result primarily of the economic depression, but also in a substantial manner due to competing forms of transportation by highway, air, water and pipe line, rail traffic and earnings have declined steadily since 1929; freight traffic in the first eight months of 1932 being 49 per cent under 1929 and net operating income for the nine months period of 1932 being 79 per cent under three years before.

5. Two elements of cost have largely withstood liquidation—taxes and wages. Comparing the decade ending in 1930 with that ending in 1900, operating revenues of the railroads increased 408 per cent; operating expenses 477 per cent; wages increased 493 per cent; railway taxes increased 830 per cent. The net operating income, from which interest and other fixed charges are derived, increased only 179 per cent. Out of each dollar of operating revenues received in the first eight months of 1932, 47.2 cents went for labor. For the year 1929, it was 42.6 cents.

6. There has been increasing competition in the past ten years from newly developed forms of transportation by highway, air, water and pipe lines. The volume of freight moved by trucks is growing rapidly. Not only does truck competition have its effect on rail traffic because of its volume, but it has an even greater effect on rail revenues due to the fact that trucks, for the most part, select the "cream of the business" carrying higher rates.

7. Rail carriers are further burdened with the require-

ment of making non-productive expenditures for the elimination and protection of railroad-highway grade crossings and many other requirements. Expenditures for grade crossing elimination alone are about $25,000,000 annually. These expenditures are largely made, not for the benefit of the railroads but for operations on the highways, including those of their competitors.

8. The railroads of the country are regulated as to all their important activities. Their rapidly developing competitors are wholly or partially unregulated.

Mr. Thom's Statement

"At the time the government undertook the regulation of the railroads," according to the statement, "they constituted practically a monopoly in the transportation field. Accordingly, governmental regulation was imposed upon them and this has been greatly increased from time to time, until now it is very strict, severe and detailed in character. The practical monopoly which the rail carriers formerly enjoyed has, however, disappeared, and they are now confronted with substantial competition by a number of other types of carriers, namely, carriers on the highways, by water, by air and by pipe line. The carriers on the highways are not regulated at all in interstate commerce, nor except in a limited way by certain states, and the other carriers mentioned are only partially and not completely or strictly regulated.

Competitive Carriers Unrestricted

"The railroads are, accordingly, confronted not only with the loss of traffic due to the depression, which affects everybody, but also by competition by efficient agencies of transportation which are largely or entirely unregulated and unhampered. These unregulated carriers may violate every principle of the 'moral code' of transportation at will and without limit. They may buy traffic. There is no control over their rates. They may unjustly discriminate between their patrons. They may pay rebates. They are under no restrictions as to their labor. They may engage in purchase and sale of articles transported, which the railroads are forbidden to do. They may do all the things which public opinion considered so objectionable, when done by the railroads, that the strict system of regulation above referred to was entered on. It is impossible, without entirely unstabilizing business, and creating chaos in commercial dealings, to continue to have some of the carriers engaged in transportation forbidden to vary from published rates, or to vary in the terms that they offer their customers, or to treat some of their patrons differently from others; and at the same time permit other carriers engaged in transportation to do all these things.

"It is submitted that if the restrictions imposed upon the railroads are wise, and in the public interest, their competitors should be similarly regulated.

"The condition of the railroads growing out of the existing depression, restrictive regulation, burdensome wage scales, excessive taxation, and to a substantial extent out of the inroads made upon their traffic by unregulated and subsidized competitors, was, at the end of the first eight months of 1932, as follows:

"Out of 162 roads or systems, operating 242,150 miles, the number earning less than their fixed charges for the first eight months of 1931 (which itself was a year of severe economic depression) was 82, covering a mileage of 110,673, which is 45.7 per cent of the total mileage; whereas for the same eight months in 1932, there were 130 roads, covering a mileage of 211,966, or 87.5 per cent of the total, not earning their fixed charges, after the revenues from the emergency rates had been deducted and paid over.

"In the first eight months of 1931, the deficit under their fixed charges of the 82 roads mentioned was $74,026,436, whereas the Class I carriers as a whole in that period earned an excess over fixed charges of $67,683,825. The 130 roads above mentioned in the first eight months of 1932 showed a deficit under their fixed charges of $255,341,081, whereas the Class I carriers as a whole during that period, after deducting the revenues from the emergency rates paid over for administration under the plan adopted, showed a deficit under their fixed charges of $216,900,721.

"The necessity for relief is very pressing."

In the statement presented to the National Transportation Committee was included a statement of policies that has just been adopted by the Association of Railway Executives, embodying a detailed legislative plan intended to bring about equality of opportunity for the railroads with all other instrumentalities that serve the public in the transportation field.

Program Urged For Immediate Action

"It is realized," continued the statement presented by Mr. Thom, "that at the short session of Congress it will be impossible to hope that legislation covering this entire field can be obtained, but, in the judgment of the executives, an earnest effort should be made to obtain certain parts of it and relief for the immediate financial needs of the carriers. The measures which the executives think should be pressed at the coming session of Congress are four in number, namely:

"(1) the amendment of the Reconstruction Finance Corporation Act so as to enable it to provide relief for the immediate needs of the carriers;

"(2) the amendment of Section 15a of the Interstate Commerce Act;

"(3) the regulation of commercial vehicles on the highways, and of water-borne traffic;

"(4) provision for the retirement of government from the business of transportation on the inland waterways, and permission for the railroads to engage in water transportation on the same terms that are permitted to all other interests.

Security Requirements For Loans Should Be Relaxed

"Many of the railroads that will need additional loans to meet their fixed charges have exhausted their supply of available collateral to secure loans; and if loans can be made to them only upon the pledge of adequate security, it will be impossible to avoid the calamity incident to their inability under present conditions to earn their fixed charges, and the interest of the public will suffer immeasurably by reason of the impairment of the value of railroad bonds held by insurance companies, savings banks, and other institutions in which the public is deeply interested.

"It is therefore urged that the Reconstruction Finance Corporation Act be amended so as to permit that corporation to make loans to the railroads (so far as consistent with the proper and equitable administration of the funds at its disposal) upon the certificate of the Interstate Commerce Commission that a proposed loan is, in its judgment, adequately secured or that the past record of the earnings of the carrier applicant and its prospect for future earnings furnish reasonable assurance of the applicant's ability to repay or refund the loan within the time fixed therefor, not to exceed 15 years, and to meet its other obligations in connection with such loan.

"The recapture provisions of Section 15a of the Interstate Commerce Act have been found most oppressive and objectionable. Under the provision as now written, a carrier may have one prosperous year and be required

to pay over one-half of its earnings above 6 per cent for that year into a trust fund to be administered by the government; while in every other year for a decade or more it may earn less than 6 per cent, or even operate at a deficit. Under the operation of this law, as it stands now, it is claimed by the Interstate Commerce Commission that something like $361,000,000 is now due to this trust fund from the carriers, some of it by carriers recently placed in receivership. No carrier has set up any amount whatever in a reserve fund to meet this liability. It was impossible for them to do so, because, in addition to their need to use in their legitimate operations all of their earnings, the basis for ascertaining the amount to be paid in was the value of the properties to be found by the commission, and that value has not been found. If now the carriers in the recapture class are required to pay the above mentioned amount, or anything approximating it, they would have to borrow the money against no new asset, in order to make the payment. This would be impossible and a condition of widespread bankruptcy would ensue—a situation which would bring calamity not only upon the carriers in the recapture class, but on all business, including the carriers not in the recapture class.

Recapture Clause Should Be Repealed

"These considerations justify and require a repeal *ab initio,* of the recapture clause of the existing law. The arguments in favor of such repeal have been so convincing that the Interstate Commerce Commission itself, the state commissions, the shippers, Class I railroads, the Association of Short Line Railroads, and 21 railroad labor unions unite in urging such repeal, and a bill is now pending in the House, on favorable report from its committee on interstate and foreign commerce, recommending such repeal."

Equality of Opportunity For All Agencies of Transportation

An effort should likewise be made, the railroads told the committee, at the present session of Congress to secure the regulation of commercial users of the highways and of waterways, and bring about an equality of opportunity for all agencies of transportation.

"Inasmuch as the public," continued the statement, "finds much of this unregulated transportation useful, the powers of the railroads should be broadened so as to enable them to perform any transportation service by any agency of transportation and to enter other transportation fields on the same terms and as free from restrictions as other persons are permitted to do. Bills to accomplish this in respect to highway transportation are pending in the House.

"There are agencies of transportation in competition with the railroads which are now substantially subsidized by the government. The commercial users of the highways operate upon a roadbed constructed at governmental expense and which is tax-free, whereas the railroads must construct their own right of way, must continuously pay interest upon its cost, must maintain it at their own expense, and must pay taxes upon it. The claim that the commercial users of the highways pay an adequate proportion of the cost of the highways' construction and maintenance is unfounded. They are using these highways as a place to do business and make profits. All they pay in return for such use is their taxes. These total taxes, being inadequate to maintain and to give a fair return on the investment, with appropriate allocation of charges to all highway users, do not contribute to other public needs as those of the railroads do. To the extent that they are inadequate, commercial users of the highways enjoy a subsidy.

"A formidable competitor of the railroads is the government-operated barge lines on the Mississippi, Warrior and other rivers. The law requires the railroads to make joint rates with this government transportation agency, which underbids the railroads by carrying traffic at rates 20 per cent below the corresponding railroad rates, and the port-to-port rates are entirely free from regulation. An attempt is made to justify this by the claim that it provides lower cost of transportation; but, in arriving at this conclusion, the distinction between the rate and the cost of service is entirely lost sight of. While the individual shipper may thus secure a lower rate than he would secure from the railroads, he receives this benefit at the expense of the tax-payers of the country who do not use the waterways, as well as those who do.

"Provision should be made at once for the government to retire from competition with the railroads in the fields of transportation. It should not give a subsidy, out of the money collected from taxes on all the people, to provide special advantages for the few shippers who can use the government agency of transportation. In fact, as a matter of sound governmental policy, the government should not engage in business in competition with its citizens.

"The railroads should not be excluded from furnishing transportation by water. Legislation to accomplish the retirement of the government from the field of competition with the railroads and to permit railroads to operate on the water, including service through the Panama Canal, should be urged at the coming session of Congress.

"The steamship lines operating through the Panama Canal have been materially aided by the government. Their terminals at ports are built largely at public expense. Railways are obliged to furnish rail connection with such service. The railroads have not been permitted to make rates competitive therewith transcontinentally, under adequate protection as to their intermediate rates contemplated by the fourth section of the Interstate Commerce Act. The responsibility for action under this section should rest more largely with the railroads."

While stating that it may not be possible to obtain any action at the present session of Congress, the railways emphasized the importance of additional legislation on the subject of consolidations or unifications.

"In at least seven consecutive Presidential messages to Congress," the statement added, "new legislation on this subject has been urged. Bills have been evolved, through intensive studies covering a series of years, which deal with this subject and which provide for voluntary consolidations. There are many advantages in well-considered consolidations and important economies could be realized when such consolidations are effected. It is important that a broad transportation policy be adopted in respect to this matter."

Railway Recommendations

The statement presented to the National Transportation Committee is divided into two parts. Part I is a factual statement of the present railway situation, and Part II contains the recommendations of the Association of Railway Executives as to policy. In discussing the results that have come from the inauguration of countless efficiencies and economies in operation, the statement said: "The increased operating efficiency of the railways has produced large operating economies, without which the rail industry as a whole could not have survived. Rail carriers have fulfilled their obligation of service to

the public with an efficient transportation machine, adequate to handle all traffic offered. They increased their capacity in response to the urgent demands of the public which could not be denied. Service has been improved and the cost of furnishing service has been reduced. Car shortages have disappeared, and motive power and car capacity have been adequate."

The statement of policies recommended to bring about equality of opportunity in transportation service is as follows:

Statement of Legislative Policies Recommended

The policies to bring about equality of opportunity in transportation service, including

1. Changes in existing legislation.
2. New legislation required.
3. Relative burden of taxation.

I—Federal Legislation

1. *Changes in Existing Legislation.*

The Interstate Commerce Act and related acts should be amended by modifying existing law so as—

(1) to permit rail carriers, under proper supervision, to combine railroad properties in the interest of better service to the public and of economy in operation;

(2) to repeal the recapture clause, *ab initio;*

(3) to provide merely for keeping up current physical inventories, in place of present valuation requirements;

(4) to repeal such provisions of the Panama Canal Act and the Denison Act as will permit rail carriers to enter water transportation everywhere on an equal basis with others; repealing those provisions of the Denison Act compelling through routes, joint rates and division of rates with inland water carriers;

(5) to repeal Hoch-Smith Resolution, which singles out the railroads to bear the burden of depressed industry;

(6) to make reparation provisions conform in principle with recommendations of the Interstate Commerce Commission in its annual report for 1931, restricting the time for making complaints and directing that no reparations be awarded except upon proof of actual damage as recognized by courts;

(7) to permit competitive adjustments of rates under the long-and-short-haul clause, with restoration of status prior to 1910;

(8) to permit the establishment of rates on particular commodities to meet competition of other agencies of transportation—

(a) independently of the rates on other commodities between the same or other points; and

(b) independently of claimed relationships with the rates on the same or other commodities between other points or territories;

(9) to provide for rate changes, especially reductions, on shorter notice than 30 days (to meet competition with other forms of transportation) unless and until similar periods of notice are required of competitors on the highway and by water;

(10) to repeal the provisions giving the Commission power to suspend rates, unless and until similar provision is applied to competitors on the highway and by water;

(11) to remove the power of the Interstate Commerce Commission to make minimum rates as to rail carriers, unless and until similar restrictions are required of competitors on the highway and by water.

2. *New Federal Legislation.*

As to interstate highway transportation. On principle, all those using the highways for commercial purposes, including common and contract carriers of property and of persons (except taxicabs, school buses and hotel buses) should be subjected to the following regulatory provisions:

A. *Common carriers.*

(1) Common carriers of persons and property should be under jurisdiction of Interstate Commerce Commission, or other properly constituted Federal tribunal, and should be required to obtain certificates of public convenience and necessity. In determining on the issue of such certificates the regulating authority should give proper consideration to—

(a) The quality and permanence of the service to be offered by the applicant.

(b) The existing transportation service, the continued existence and adequacy of which are essential to public welfare, whether by motor vehicle, water, rail or other agencies of transportation, as to its present adequacy and possibilities for improvement to meet all reasonable public demands and the effect thereon of the proposed service.

(c) The necessity for and convenience to the public of the proposed operation.

(d) The financial responsibility of the applicant, including adequate provision for surety, or insurance, bond or agreement, for the protection of the public.

(2) As to common carriers, adequate requirements should be imposed to insure just and reasonable rates, with provisions for the publication thereof and adherence thereto and proper inhibition against undue and unjust discrimination.

(3) Provision should also be made for the keeping of proper accounts, in form prescribed by the Commission, and for the filing of such periodic and other reports as the Commission may require.

(4) Provision should further be made for the regulation of security issues.

B. *Other commercial carriers.*

(1) All other commercial carriers should be required:

(a) to secure a permit from the duly authorized regulatory body;

(b) to keep such records and file such reports as the regulatory body may prescribe;

(c) to carry liability insurance or file indemnity bonds to secure the other users of the highways and the general public in cases of personal injury or property damage.

(2) Contract carriers should be required in addition—

(a) to observe minimum rates to be fixed by the regulatory body on a mileage or other appropriate basis;

(b) to comply with the rules and practices and charge the rates for service as far as may be announced by the regulatory body.

C. Every commercial carrier shall be subject to all the regulations and conditions in each State that duly authorized State authorities impose upon all commercial operations on its highways, including taxation and compensation for the use of the highways and contributions to their construction, maintenance and upkeep.

D. Opportunity should be given for rail carriers to engage, either directly or through subsidiaries, in motor vehicle service on the highways on equal terms with all others and without discrimination in favor of or against other transportation agencies in the same field. This should include right to purchase, equally with all others, lines then in operation as well as to establish new lines. Necessary modification of the antitrust laws should be made for this purpose.

E. Suitable provisions should be enacted for enforcing all regulatory provisions.

As to Waterway Transportation. Present conditions with respect to transportation by water, coastwise, intercoastal and on the navigable waters of the United States, call for legislation covering—

(a) retirement of the government from operation of barge lines in competition with private enterprise;

(b) extending jurisdiction of the Interstate Commerce Commission over commercial operations by water, coastwise, intercoastal and on the navigable waters of the United States;

(c) application to commercial operations by water of appropriate provisions of the Interstate Commerce Act, similar as far as applicable to those applying to railroad operations;

(d) opportunity for the railroads to enter this field of transportation without handicap as compared with other transportation agencies;

(e) assessment of charges against all commercial users of improved waterways of the United States, to compensate the taxpayers for their investment in such waterways and expenditures for administration, maintenance and operation.

(f) modifying law so as to provide that consideration be given to requirements of land transportation in necessary bridge and channel changes on navigable streams, and so as to provide that all these contingent costs shall be borne by the interests which will profit by waterway development.

It is urged in this connection that the government shall not continue improvements on inland waterways and extension of

operations thereon, except where the expenditures are justified after full allowance is made for all costs involved and including the cost to the taxpayers who furnish the money for improvement and maintenance of these projects. In all cases, proper consideration should also be given to the effect that the proposed extensions of operation on inland waterways will have upon other forms of existing transportation, the continued existence and adequacy of which are essential to the public welfare.

II—State Legislation

1. *As to commercial highway transportation*: State legislation is the principal source of relief from the inadequate regulation and from the present subsidy of commercial motor vehicles—the two main causes of the existing inequitable competition. The regulatory provisions of all states, therefore, should be extended so as to include the following provisions:

a. *Common carriers:*

(1) Certificates of public convenience and necessity authorizing the operation. In determining on the issue of such certificates the regulating authority should give proper consideration to—

(a) The quality and permanence of the service to be offered by the applicant.

(b) The existing transportation service, the continued existence and adequacy of which are essential to public welfare, whether by motor vehicle, water, rail or other agencies of transportation, as to its present adequacy and possibilities for improvement to meet all reasonable public demands and the effect thereon of the proposed service.

(c) The necessity for and convenience to the public of the proposed operation.

(d) The financial responsibility of the applicant, including adequate provisions for surety or insurance, bond or agreement, for the protection of the public.

(2) Regulation of rates, fares and charges.

(3) Requirement of a uniform accounting system and such reports as may be appropriate.

(4) Regulation of security issues.

(5) Qualifications and hours of service of drivers.

(6) Regulation as to safety devices and measures, size, weight, speed and operation of motor vehicles.

(7) In addition to license fees, adequate charges should be assessed for the commercial use of the highways based upon the extent of such use.

b. *Other commercial carriers:*

(1) Permits authorizing the operation; the regulating body to consider effect of proposed operation upon the highways and upon the safety and convenience of the traveling public.

(2) Requirement of such a system of accounting and reports as may be appropriate.

(3) Compulsory insurance for the benefit of the public.

(4) Qualifications and hours of service of drivers.

(5) Regulation as to safety devices and measures, size, weight, speed and operation of motor vehicles.

(6) In addition to license fees, adequate charges should be assessed for the commercial use of the highways based upon the extent of such use.

(7) As to contract carriers, regulation of rates, fares and charges—at least to the extent necessary to avoid preferences and undue competition.

c. State laws should be repealed that require railroads to make capital expenditures for grade crossing elimination and protection in excess of benefits received.

d. Adequate provision should be made for enforcing all regulatory provisions.

III—Relative Burden of Taxation

In 1931 Class I railroads paid in taxes 7.24 cents out of every dollar of gross revenue received. In the same year 31.63 cents was paid in taxes out of every dollar of net operating revenue; which means, in other words, that almost one-third of the railroad plant was operated for the support of Federal, State and local governments.

In respect to taxes the railroads, representing the second largest industry in the country, urge:

(a) Greatest possible economies in government expenses;

(b) Elimination of expenditures by the government for increasing, extending and subsidizing transportation facilities where adequate facilities of transportation already exist.

(c) An equitable tax on other transportation agencies in order that all transportation agencies may pay a fair share of reasonable expenses of government.

These recommendations are based on the premise that adequate railroad transportation facilities are essential today and will be tomorrow for economic welfare and progress and for national defense.

The railroads can only meet this situation on a basis of equality of opportunity. The inequitable relationship of today can not continue if railroad service of tomorrow is to meet the public's requirements. Progressive and sound coordination of all means of transportation cannot otherwise be achieved. There is involved, first, a relaxation of existing regulation imposed upon rail carriers in view of the recent and rapid development of competitive forms of transportation, and, second, the application of similar regulatory provisions to these new forms of transportation which have entered the same field of service.

It is for that purpose and with that end in view that the foregoing recommendations have been made. It is essential that the realization of this purpose shall be had at the earliest possible moment.

In addition to the material filed with the committee by various organizations it also has available a mass of material consisting of the newspaper predictions as to what it would recommend. One paper published a number of such proposals said to have been made known by a "government official who would not permit his identity to be revealed" who was said to have talked with "some" members of the committee, and whose ideas were strangely similar to those attributed to Senator Couzens in another paper. It is perfectly obvious to members of the Coolidge committee, according to "this official" that "the present capital structure of railroads must be greatly diminished if returns are to be earned on that part of the structure used and useful in transportation."

Committee Hearings

The committee opened its hearings on December 7, on which date it received the presentations of the Lake Carriers' Association, the National Association of Mutual Savings Banks, the Security Owners' Association, the National Automobile Chamber of Commerce and the National Aeronautic Association.

Each of the organizations appearing on December 7 had previously submitted briefs to the committee and the oral presentations were largely in amplification of such briefs and to answer formal questions submitted by the committee or inquiries of its individual members. The bulk of these latter were asked by Alfred E. Smith and Alexander Legge.

Lake Carriers Oppose St. Lawrence Seaway

Captain J. S. Wood, president, and Louis C. Sabin, vice-president, appeared for the Lake Carriers' Association to voice that organization's opposition to the construction of the proposed St. Lawrence seaway. Present transport facilities in the area involved, Mr. Sabin said, are adequate and thus he thought the cost of the project to the United States would be all out of proportion to any possible benefits. The potential savings set up for the project, he continued, have already been largely realized by reason of the existing 14-ft. channel in the St. Lawrence and the 9-ft. channel in the New York Barge Canal.

Captain Wood told of a test run which he made to determine insurance rates on large ships which might desire to use the proposed seaway. He took a large lake vessel through the narrow parts of the St. Lawrence and from this experience he painted what he called the "practical operating picture." The insurance

rate quoted him for the trip was $4,000 provided the insured waived the right to recovery on the first $5,000 of damage. Such a rate, Captain Wood calculated, would have amounted to two cents a bushel on the cargo of grain carried and this, he thought, would preclude the use of the proposed seaway by the larger craft.

Savings Banks Represented

Henry Bruere, president of the Bowery Savings Bank of New York, and Philip A. Benson, president of the Dime Savings Bank of Brooklyn, N. Y., collaborated in making the presentation on behalf of the National Association of Mutual Savings Banks. This organization, in its brief, declared that the railroads suffer from special handicaps which make their difficulties more than cyclical. In this connection, in addition to the depression, the brief listed: Failure of regulation as a whole and of Section 15a in particular; competition from other forms of transportation; the policy of refunding railway debt rather than repaying at maturity; and failure to effect consolidations. The remedies, it continued, should be of two types—those of an emergency character and those looking to a permanent solution. In connection with the former it advocated an extension of the R. F. C. loaning period and a relaxation of its collateral requirements so that wholesale receiverships may be prevented. As to a permanent solution the Savings Banks Association would amend the rate-making provisions to permit the carriers to earn sufficient in good years to tide them over bad, and to place an affirmative duty on the Interstate Commerce Commission to observe the credit of the carriers in its rate-making determinations. In addition it recommended regulation by the commission of all transportation, the co-ordination of transport under the leadership of the railroads, and railroad consolidations.

The oral presentations of Mr. Bruere and Mr. Benson were in the main amplifications of these proposals. The savings banks, Mr. Bruere said at the outset, did not come before the committee with great anxiety about their railroad investments. If only the bondholders, such as they, were to be considered, he continued, there would be little to worry about but he went on to stress the necessity for general corporate stability among the railroads. Mr. Benson, in commenting on legal requirements for fiduciary investments, stated that unless the general railway situation improves fiduciary institutions may be reluctant to supply necessary capital to the railroads in the future.

Security Owners Submit Brief

The brief of the Security Owners' Association advocated equal regulation of all forms of transportation; prompt consolidation of railroads; revision of the rate-making provisions of Section 15a of the Interstate Commerce Act; repeal of recapture; revision of the valuation provisions so that the commission would be required merely to take note of changes in property from year to year; creation of a department of transportation with a Secretary of Transportation in the President's cabinet; reorganization of the I. C. C.; provisions for reorganizing railway capital structures without the advent of receiverships; and adequate provision for the retirement of railway bonds at maturity. Milton W. Harrison, president of the Security Owners' Association, appeared for questioning by the committee on these recommendations.

Highway and Air Interests Testify

A. J. Brosseau, vice-president and chairman of its motor truck division, represented the National Automobile Chamber of Commerce. This organization had filed with the committee a 65-page brief from which a press release abstracted "22 fundamentals considered by the Chamber representatives as essential to an understanding of the transportation problem." Mr. Brosseau read a further prepared statement and proceeded to answer a series of questions submitted by the committee. It was his opinion that motor carriers are now contributing amply for the support of the government and that effective co-ordination in transportation will come when the railroads adopt the policy of selling transportation as a commodity. Some shippers now using trucks, he added, might give the railroads business if the railroads gave the types of transportation service desired.

Senator Bingham of Connecticut, president of the National Aeronautic Association, made the presentation on behalf of that organization, which presentation comprised answers to a series of questions which were submitted to him by the committee. When asked if air transport companies should be taxed to maintain airways, he expressed the opinion that they should not, at least until ocean carriers were taxed to maintain lighthouses and other similar services. As to air mail service, Senator Bingham agreed that some routes were subsidized but so also, he said, is the rural free delivery service.

Ashburn Files Memorandum

Major General T. Q. Ashburn, president of the Inland Waterways Corporation, having been invited to submit a written memorandum on basic transportation matters, presented to the Committee a written memorandum in answer to questions, stating in part that the total traffic carried by the corporation up to September 30, 1932, amounted to 12,524,221 tons. Of this total 1,236,332 tons were carried in the first nine months of 1932.

The rate differential as compared with railway rates, he said, varies from 20 per cent to 10 per cent, as prescribed by the Interstate Commerce Commission in Ex Parte No. 96.

Question. What is the operating deficit, if any?

Answer. The corporation has no operating deficit, but had a net operating income, June 1, 1924, to include September, 1932, of $922,871.34.

Since that report the operating income was increased by October operations to $976,096.67.

Q. What are the estimated savings which the corporation has affected for the American people?

A. The total estimated saving in freight, as reported by the Comptroller, amounted, up to September 30, 1932, to $18,085,700.

The General also furnished the Committee with a copy of his speech before the Mississippi Valley Association, in which he took up and answered in detail, all charges made against the corporation.

He has since been informed by the Committee that the conference, set for 12 noon, Thursday, December 8, would be confined entirely to discussions and questions.

The Railway Labor Executives' Association, meeting at Chicago on December 8, preliminary to a joint wage conference with railway executives, rejected an invitation of the National Transportation Committee, headed by Calvin Coolidge, to appear at the hearings now being conducted in New York. In a reply to the Committee labor leaders expressed the belief that Congress should investigate the railway industry, not only because the subjects which the committee proposes to investigate are within the purview of existing governmental agencies but because the Committee has been appointed and is being financed by special bondholding interests and cannot investigate such problems as unemployment, wages and working conditions impartially.

Water Treating Plant at Huntington, W. Va.—Two Tanks of 500,000-Gal. Capacity Each

Better Water Service Pays Large Returns on Chesapeake & Ohio

Centralized administration of the construction and operation of the facilities for delivery and treatment is responsible for marked economies and more reliable supplies

THE Chesapeake & Ohio, as a part of its program of improving existing facilities and providing additional facilities for handling a larger volume of business, with the assistance of a consultant specializing in railway water service, made a study of its water supply, pumping and storage plants late in 1921 and created a water supply department in December, 1922, with a superintendent of water supply on the general office staff in order to centralize the control of the design, installation, operation, and maintenance of the water stations as well as the treatment and correction of the quality of the water.

Improvement in the water supply plant, following a thorough survey of the existing facilities and their relation to operating requirements, had to be approached at the start from the standpoint of the most urgent needs. Projects were undertaken first at stations responsible for the greatest shortage of water or most frequent interruptions of service, as well as at points where a poor quality of water was the source of maximum trouble. All of these earlier projects, however, were made to fit into a general plan providing for a reliable and adequate supply of water at suitably spaced stations.

Along with this work, progress was being made in building up the organization according to a plan that is described in detail in the following columns. However, it is essential to point out here that steps were taken at once to insure that the best possible results were being obtained in the operation of the existing facilities. A system of supervision was set up to see that defects in equipment were discovered before emergency measures were necessary, and, in the case of water treatment, that man failures would not contribute to improper performance due to inadequacy of plants. In a word, the whole plan was founded on the idea of fixing responsibility all along the line so that someone would be directly accountable for any water supply failure that occurred.

Important among the items on the improvement schedule was the retirement of inefficient and unreliable pumping equipment, most of which consisted of reciprocating units operated by steam. These were replaced by centrifugal pumps driven by oil engines or electric motors. However, the improvement of pumping equipment was not confined to the machinery; in a number of cases it included also new pump houses and the construction of better suction lines and intakes. This last was a primary feature of a number of projects involving plants that take water from rivers, as in the case of plants on lines along the Ohio. The new plants have proved very reliable in service and as their number has increased the water supply failures have virtually ceased.

Other Improvements

Another factor in insuring reliability of supply has been the extensive construction of storage tanks, partly to replace worn-out tanks but largely to increase the storage capacity. These increase the available supply during periods of enforced shutdowns of pumps, and with adequate pumping capacity reduce the pumping hours per day. The new tanks are largely of the standpipe type.

In several cases greater flexibility in pumping operations and a reduction in the cost of pumping were effected by replacing discharge pipe lines of inadequate sizes with pipes of larger diameters. At not a few points, also, water columns were relocated or new ones provided in locations that eliminate unnecessary train stops for taking water.

Up-to-Date Water Station and Treating Plant at Vauces, Ohio

Summing up the improvements of the character outlined above, the Chesapeake & Ohio completed projects between 1923 and 1929, inclusive, that embraced 6½ million gallons of tank storage, mostly of steel construction; 12 complete new pumping stations in addition to 11 new oil engine-driven and 6 electric motor-driven pumping units installed in old plants; 26 water columns; 16 new pipe lines or extensions of old ones; the enlargement of a reservoir; new or improved water distributing systems at 9 terminals, shops, storehouses, etc.; and fire protection systems for valuable property at 12 points. The extent of the improvement in facilities is indicated by the fact that of 202 water stations now in operation, 150 are provided with efficient modern equipment, whereas, in 1922 only 19 out of a total of 204 plants were of types that could be classed as other than obsolete or inadequate.

The program for improving water station facilities was planned with due consideration to a concurrent program for providing locomotives with tenders having water capacity of 16,000 gal. since this necessarily called for water at a fewer number of stations and pointed to the possibility of abandoning certain stations while insuring water supply at intervals consistent with the needs of the locomotives equipped with the smaller tanks. It is notable that operation with 95 tenders of 16,000 gal. water capacity indicated further possible economies with even larger tanks, and new equipment secured later included 40 tenders with 23,500-gal. capacity and 99 with 21,000-gal. cisterns. These large tenders have proved particularly advantageous in reducing the number of train stops formerly made for taking water, and also in permitting the locomotives to run by stations of inadequate supply or bad quality.

Serious Need for Water Treatment

Improvement in the quality of the water delivered to locomotives and stationary boilers occupied an important place in the program. The C. & O. obtains a large portion of its water supply from streams and rivers, the quality of which fluctuates with the local conditions and the seasons. East of the Allegheny mountains the streams, as a rule, contain little dissolved mineral matter and are reasonably satisfactory for boiler use. An exception to this rule is the James river, an important source of supply which carries considerable suspended matter and is polluted with industrial wastes. West of the mountains as far as Cincinnati, most of the streams are contaminated with coal mine drainage which frequently contains sulphuric acid that destroys alkalinity, causes the formation of a hard scale and is responsible for serious corrosion unless the water is treated. On the Chicago division, water is obtained from streams and wells and is in most cases of a scale-forming character.

Water treatment was undertaken as early as 1912 when nine small lime-soda ash plants were installed on the Chicago division, which, together with a few on other divisions increased the total to 14 in 1922. However, some of these older plants were of inadequate size to meet the growing demands for water and much water of poor quality was not being treated. Furthermore, the treatment at the plants was not under adequate chemical control and, on the whole, the quality of water supplied to boilers was far from satisfactory.

Build New Treating Plants

Following a study of the treating facilities and their performance in 1923, several of the old plants were abandoned and a greater number of new ones were built, so that during 1924 and 1925 there were 30 plants in service. Seventeen more were installed in 1926 and one more in 1927. By 1928 the number had been increased to 60, in 1929 to 68 and since 1929 there have been 72, with the result that at present approximately 80 per cent of the water delivered to locomotives is being subjected to some character of treatment.

Of the 72 plants, 45 are lime-soda ash plants (43 continuous and 2 intermittent), 14 are sodium-aluminate plants, 10 provide roadside soda-ash treatment, 2 are zeolite plants, and one is a soda-ash sodium-aluminate plant. The quantities of water treated in these 72 plants in 1931 were as follows:

No.	Type	Gallons Treated
45	Lime—soda ash	3,332,050,000
14	Sodium aluminate	461,216,000
10	Soda ash	76,324,000
2	Zeolite	69,877,000
1	Soda-ash sodium-aluminate	28,223,000
	Total—all plants	3,957,690,000

Among the water treating plants on the Chesapeake & Ohio are some of the largest in the country, four plants being each capable of treating over a million gallons per day while three others have capacities closely approaching that daily output.

The problem of obtaining a good quality of water was not approached solely from the standpoint of treatment. Good water, for example, obviates the need for treatment on the Clifton Forge division, except at one point where the need for a plant has been dispensed with by the purchase of city water derived from mountain streams. A similar arrangement was made at another point to permit the use of muddy river water to be discontinued.

At two points on the Richmond division, settling tanks were installed to remove suspended matter.

Administration of Water Service

While a detailed account of the improvement of the physical plant has preceded an exposition of the admin-

A New 200,000-Gal. Steel Tank Supplemented the Old Storage Facilities at Huntington, W. Va.

istrative features of the Chesapeake & Ohio's program for better water service, this does not imply that it is any more important. As a matter of fact, the success of the program has been due, as much if not more, to the care with which the improvements were designed and constructed and to the efficiency with which they are operated and maintained. This must be accounted for by the plan under which the system water supply department has worked in close co-operation with the various units of a property that is organized on the division basis.

The need for additions and betterments to water supplies originates in large part with the divisions, which must of necessity provide much of the operating data on which studies for new facilities are founded. The division supervisors of water service, together with the pumpers, water treating operators and repair forces are carried on the division engineer's payroll and are responsible to him for the work they do. To fit into this arrangement, the staff of the system superintendent of water supply is organized to fulfill three separate functions, namely, design, chemical control, and supervision of plant operation and maintenance.

The first function embraces the work of an assistant engineer of water service design who, with one or more engineer-draftsmen, works out the various hydraulic problems, studies the physical requirements of each project and develops the plans from which the construction is carried out.

This force has also done much to standardize water service equipment on the C. & O., as outlined in following paragraphs.

Chemical Control

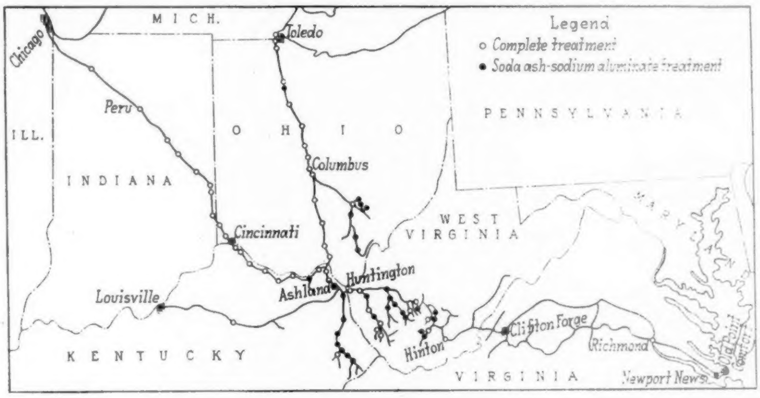
The second function requires the services of a chief chemist and four assistant chemists who check and regulate the treatment of the water at all treating plants at least twice each week and oftener if necessary. Laboratories are maintained at the department headquarters at Huntington, W. Va., and at Peru, Ind., and Columbus, Ohio. Samples of water sent into these laboratories are tested regularly for hardness, alkalinity and causticity, and if any change in the treatment is found necessary, instructions go out the same day that the samples are received. In addition, water from each plant is checked for chlorides once each month, and complete quantitative analyses for dissolved solids are carried out whenever it is deemed necessary.

A measure of the result of this rigid supervision of the treatment is afforded by the fact that of 6822 samples of treated water received at the laboratories during 1931 only 54 or 0.8 per cent were found on test to show "treatment failures," whereas in 1923, when this system was introduced, 29.3 per cent of the samples disclosed such "failures." In accordance with an arbitrary rule adopted by the department a sample is rated a "treatment failure" when it tests more than three grains per gallon of hardness if it is taken at a lime-soda ash plant, or less than two grains of alkalinity in excess over the hardness if taken from a soda ash or sodium-aluminate plant. In addition to 14,145 analyses of treated water, the chemists in 1931 made 9485 tests of raw water, 69 complete water analyses and 602 boiler water analyses, in addition to 281 miscellaneous analyses of chemicals, coagulants, salt, oils, etc.

As a consequence of this close check on the performance of the treating plants it has been possible to apprehend defects in treatment and institute corrective measures quickly. However, the high standard of operation obtained is due not so much to the correction of defective treatment when discovered, as to the effect of the close supervision on the attitude of the plant operators toward their work.

The beneficial results of water treatment are evidenced by the fact that it has been possible to increase the interval between boiler washouts from as short a time as three to four days to the full 30-day statutory limit.

In addition to the direct operating saving thus realized, it has been possible to postpone indefinitely projects for increasing the number of stalls in roundhouses. However, increasing the time between washouts has given rise to the need for carefully prepared blow-off schedules for the various engine districts, based on analyses of water taken from locomotives on the road. During periods of extreme drought when the concentration of dissolved solids has increased very rapidly in certain districts, an even closer check has been maintained by stationing chemists at engine terminals so that they may make analyses of the boiler water of each locomotive before it is checked out.



Map of the Chesapeake & Ohio, Showing the Distribution of the Treating Facilities

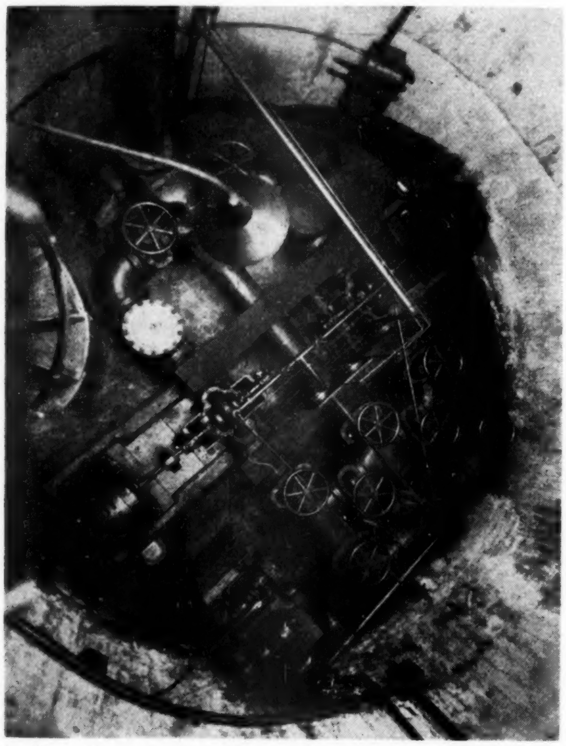
Supervision of Operation and Maintenance

The third function of the water service department is exercised by three inspectors, a chief and two assistants, who are continually on the road, not only checking the operation and maintenance of the water service facilities but also instructing the water supply forces in the details of their work. As a result, the pumpers and repair men know what is expected of them, the plants are kept clean and orderly and, above all, defects in methods and in the physical condition of facilities are discovered before they are sufficiently serious to result in breakdowns. The work of the repair forces is, therefore, conducted according to an orderly routine which is broken only at infrequent intervals to take care of the emergencies occasioned by unusual breakdowns or other conditions resulting in interrupted service at any of the stations.

For some time following the creation of the water service department, staff meetings were held on the various divisions to afford an opportunity for members of the department to give instruction to water service forces in the details and routine of the work, but after an effective system of co-operation between the division and department personnel had been thoroughly established these meetings were found unnecessary.

Measurable economies have been effected as the result of steps taken to effect a gradual standardization of water service equipment, including steam-pump boilers

and appliances, steam pumps, water columns, valves, hydrants, pipes and fittings, packing, tank fixtures, and chemicals. This has not been carried out in an arbitrary way that would result in the scrapping of valuable equipment and confine purchases to a limited group of manufacturers, but along thoroughly practical lines. For example, as the improvement program was carried out, steps were taken to concentrate particular sizes and makes of equipment on certain divisions. Also in the case of pipe, 5-in., 7-in., and 9-in. sizes have been eliminated, thus doing away with the need of carrying fittings for these sizes in stock.



Looking Down Into a Pump Pit Equipped With Modern Electrically-Driven Centrifugal Pumps

Along with the reduction in stocks that has attended the movement for standardization, much progress has been made in the more systematic handling of requisitions for repair parts and other materials. Standardization has carried with it the more specific description of all materials used so that there is now no excuse for a misunderstanding as to what is wanted. As a further check, all requisitions are reviewed in the office of the water service department before they are sent to the stores department.

Keep Cost Records

Among the most important factors in the attainment of economy in water service is a system of cost records whereby both the division staffs and the superintendent of water service receive monthly statements of operating and maintenance costs for each water station, together with the gallons of water pumped, and in the case of treating plants, also the amount of water treated and the amount of chemicals used. This information, in addition to the record of the treatment, compiled from the analyses of the water made in the three chemical laboratories, provides the superintendent of water supply with complete data on which to pass judgment on the efficiency of each water station and enables him to run down quickly any deficiency in performance.

Something of the results obtained by the improvements in plants and organizations for water supply on the Chesapeake & Ohio is afforded by the following comparison of figures pertaining thereto for 1923 and 1931. Thus, although the track mileage increased from 2552.7 to 2732.6, or 7 per cent, and the traffic handled from 25,153,672,000 gross ton-miles in 1923 to 39,958,716,000 in 1931, or 59 per cent, the number of water stations was reduced from 207 in 1923 to 204 in 1931, while the water pumped or purchased decreased from 7,653,490,000 gal. in 1923 to 6,211,448,000 gal. in 1931, a reduction of 19 per cent, which is ascribed to better facilities and a campaign for a reduction in water waste.

The unit cost per 1000 gal. of water delivered was slightly higher in 1931 than in 1923, but this is explained by the much larger proportion of water treated in the latter year, 72.6 per cent as compared with 17.5 per cent in 1923.

Water costs were also influenced by the severe drought that prevailed in 1929, which necessarily called for measures that would not be demanded in a year of normal supply. However, it was necessary to go to the extent of hauling water to only three stations, as the large locomotive tanks, together with ample supplies at a large part of the stations, made it possible to avoid the stations where there was a shortage.

The 72 treating plants in service in 1931 removed 5,357,100 lb. of encrusting solids from water supplied to locomotives and other steam generating equipment. This quantity is better visualized as 50 carloads of material, or—as it is approximately the equivalent of limestone—as enough stone to build a wall 2 ft. thick by 10 ft. high, one-quarter mile long. It is estimated that the removal of this material resulted in a gross saving in locomotive operation and maintenance of $696,500, which, after deducting $198,502 for the cost of treatment, leaves a net saving of about $498,000 as the return on a plant investment of $572,710.

The facilities for the treatment of water were also put to a severe test by the drought of 1929 and 1930, because of the marked concentration of dissolved solids that occurred in many supplies, especially streams, with the decrease in the discharge. This resulted in an increase in the outlay for chemicals but in only a minor falling off in the quality of water delivered to locomotives. It is apparent also that without the improved facilities and administration of water supply and treatment, the Chesapeake & Ohio would have been confronted with well-nigh insurmountable difficulties as a consequence of the drought during those two years.

In the absence of comprehensive statistics on water supply performance and costs prior to the formation of the department, there are no figures available covering the operations before 1923, which may be used in comparison with corresponding figures for later years. However, the records indicate that mechanical failures at pumping plants which previously had occasionally disrupted train service and compelled maintenance forces to devote a large part of their time to emergency repairs, have been practically eliminated. Heavy expenditures for boiler and fire-box maintenance previously caused

Locomotive Failures Due to Leaking Flues, Etc.

Year	Total Failures	Per Billion Gross Ton-Miles	Per Million Locomotive Miles
1923	186	7.40	7.57
1924	80	2.81	3.03
1925	15	0.45	0.523
1926	16	0.415	0.536
1927	5	0.131	0.172
1928	3	0.083	0.107
1929	4	0.084	0.129
1930	4	0.089	0.140
1931	2	0.050	0.083

by bad water have been materially reduced. On the divisions where flue renewals were formerly required at intervals of only 9 to 18 months, the life of these flues has been extended, in most cases, to the full four-year government limit, and in some cases special extensions over this limit are being granted. The constructive supervision given the water supplies has been an important contributing factor in the steady improvement shown by the statistics on locomotive performance as is indicated by the table of leaky failures of locomotives due to water conditions.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended November 26, which included the Thanksgiving Day holiday, amounted to 493,882 cars, a reduction of 81,969 cars as compared with the preceding week. Compared with the corresponding week of last year this was a reduction of 64,916 cars and compared with 1930 it was a reduction of 207,168 cars. Loading in the week ended November 19 had amounted to 575,851 cars, which represented an unseasonal increase as compared with the week before which included Election Day and Armistice Day. In the week of November 26 loading of coal and coke showed increases as compared with the corresponding week of last year. The summaries, as compiled by the Car Service Division of the American Railway Association for the weeks ended November 19 and 26, follow:

Revenue Freight Car Loading

Week Ended Saturday, November 26, 1932

Districts	1932	1931	1930
Eastern	109,496	120,175	154,714
Allegheny	90,105	111,114	133,380
Pocahontas	36,965	33,757	43,493
Southern	74,779	85,898	112,274
Northwestern	57,010	65,152	79,090
Central Western	78,864	92,818	114,038
Southwestern	46,663	49,884	64,061
Total Western Districts	182,537	207,854	257,189
Total All Roads	493,882	558,798	701,050
Commodities	1932	1931	1930
Grain and Grain Products	26,650	29,592	33,633
Live Stock	17,113	23,563	23,760
Coal	115,070	104,451	147,817
Coke	4,945	4,741	7,774
Forest Products	14,757	19,835	32,095
Ore	1,726	4,190	5,773
Mdse. L. C. L.	147,161	177,033	194,759
Miscellaneous	166,460	195,393	255,439
November 26	493,882	558,798	701,050
November 19	575,851	653,503	779,752
November 12	537,093	689,960	829,023
November 5	588,383	717,048	881,517
October 29	617,642	740,363	934,715
Cumulative total, 47 weeks	25,707,996	34,376,466	42,320,637

Week Ended Saturday, November 19, 1932

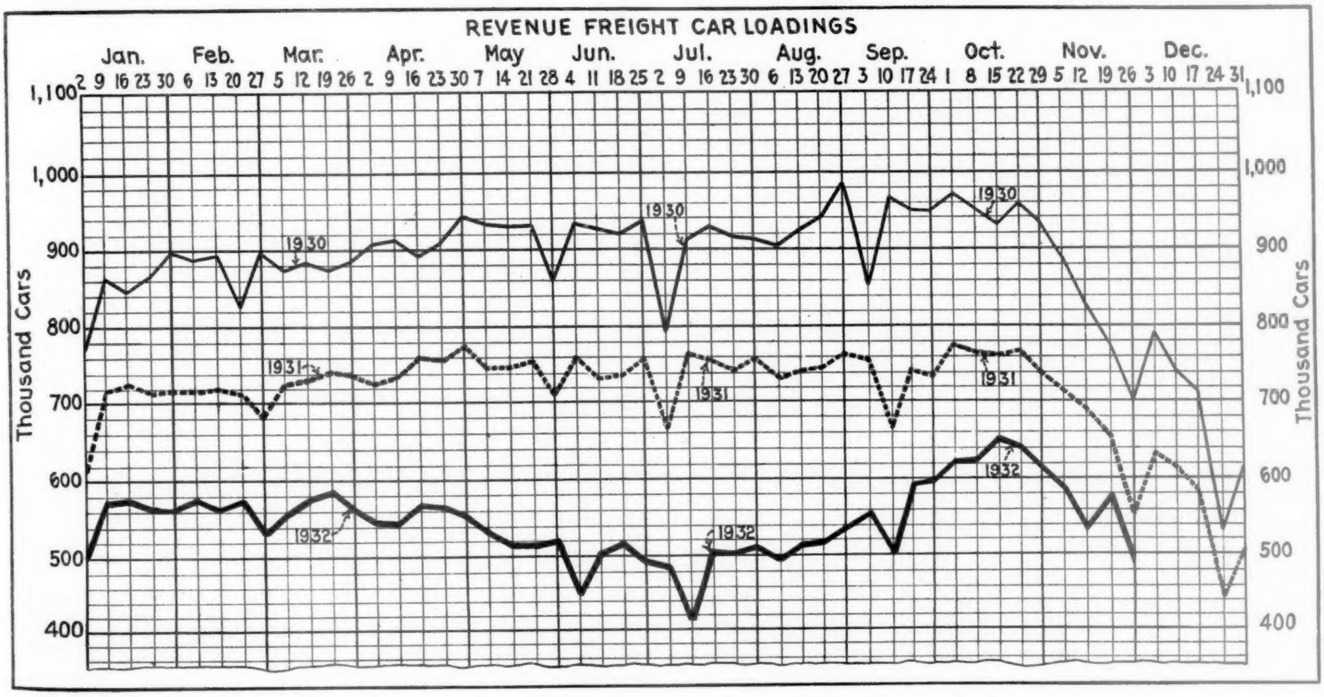
Districts	1932	1931	1930
Eastern	127,417	141,290	175,072
Allegheny	105,305	130,454	156,009
Pocahontas	43,980	40,408	46,159
Southern	86,775	97,845	117,910
Northwestern	66,557	75,973	89,474
Central Western	91,732	107,380	125,477
Southwestern	54,085	60,153	69,651
Total Western Districts	212,374	243,506	284,602
Total All Roads	575,851	653,503	779,752
Commodities			
Grain and Grain Products	29,653	36,872	36,348
Live Stock	21,027	25,547	24,845
Coal	137,908	116,699	147,923
Coke	4,969	4,850	7,441
Forest Products	16,134	21,227	33,111
Ore	2,991	4,901	8,223
Mdse. L. C. L.	171,250	209,033	229,521
Miscellaneous	191,919	234,374	292,340

The freight car surplus on November 14 amounted to 589,050 cars, an increase of 43,893 cars as compared with the number on October 31. This included 335,125 box cars, 188,576 coal cars, 27,835 stock cars, and 10,819 refrigerator cars.

Car Loading in Canada

Car loadings in Canada for the week ended November 26 amounted to 43,266 cars, a decrease from the previous week of 2,684 cars, and, after adjustment for seasonal variation, the index number dropped to 59.23, a new low point for the past two years.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
November 26, 1932	43,266	17,251
November 19, 1932	45,950	17,594
November 12, 1932	44,276	17,345
November 21, 1931	53,346	21,791
Cumulative Totals for Canada:		
November 26, 1932	1,999,480	888,398
November 21, 1931	2,353,706	1,179,472
November 22, 1930	2,904,197	1,561,148



Annual Report Panama Canal

TRAFFIC through the Panama canal continued to decline through the fiscal year 1932, according to the annual report of the governor of the canal. The daily average of commercial transit decreased almost steadily from 13.10 in July, 1931, to 11.20 in June, 1932. For the year it averaged 12.31, as compared with 15.15 in 1931, 16.95 in 1930, 17.37 in 1929, and 17.63 in the peak year 1928.

The history of traffic through the Panama canal from its opening on August 15, 1914, was one of slow growth in the first eight years, during which the maximum transits in a fiscal year were 2,892 in 1921. With the development of the California oil fields the traffic moved up sharply in 1923, to 3,967 transits and in 1924 to 5,230. It continued at about this level until the business expansion of 1928 and 1929, reaching a peak of 6,456 transits in 1928 and 6,413 in 1929. From this peak it has receded distinctly, and for 1932 was less than in 1924. Transits, tolls, and tons of cargo in 1932 were the lowest since 1923. Net tonnage of vessels, Panama canal measurement, was also lower than in 1924 but exceeded the net tonnage in 1925.

Peak figures for canal transits for the 18 years of canal operation occurred in 1928, when a total of 6,456 commercial vessels were passed through. The greatest tolls, $27,127,376.91, and largest amount of cargo to have passed through, 30,663,006 tons, were in 1929; and the largest aggregate net tonnage, Panama canal measurement, 29,980,614, was reported in 1930.

The number of transits of commercial vessels in 1932 was 4,506, compared with 5,529 in the preceding year, a decrease of 1,023, or 18.5 per cent. The total of toll-paying and free transits combined, which includes all seagoing vessels of 20 tons or over, numbered 4,979, in comparison with 6,097 in 1931, making daily averages of 13.60 and 16.70, respectively.

Tolls collected amounted to $20,707,377.05, a loss of 16 per cent as compared with 1931.

Decline of Cargo Tonnage

Cargo carried through the canal amounted to 19,807,998 tons, a decline of 21 per cent in comparison with 1931. The large decline in cargo tonnage was the most pronounced feature of the general loss in all phases of canal traffic, indicating that lines have not suspended sailings in the same proportion as the decline in cargo offerings.

During 1931 the decline in cargo tonnage was relatively higher in the movement from Atlantic to Pacific, which was due largely to the decrease in shipments of various manufactured goods coming from the United States and Europe. In 1932 this trend was reversed, the largest decline having occurred in the Pacific to Atlantic movement, which for the most part consists of raw materials, prominent among which are mineral oils, ores, lumber, and nitrates. The decline in cargo tonnage in this direction was 23 per cent, compared with the movement in 1931, while in the opposite direction the decrease was 15.6 per cent.

The net income from tolls and miscellaneous receipts, known as canal revenue, was $11,194,800.88, or $3,402,426.33 below similar income for 1931, and $6,780,043.78 below 1928, the latter representing the year of peak income derived from canal operations. The decline in net income in the past year is due wholly to the decline in revenue received from canal transits, the receipts from tolls having decreased $3,937,981.90 as compared with the receipts in 1931.

Total canal revenues, exclusive of profits derived from business operations, totaled $21,034,012.72 as compared with corresponding figures of $24,990,580.84 for the preceding fiscal year. Expenses of operation and maintenance, exclusive of business units, aggregated $9,839,211.84, leaving net canal revenues amounting to $11,194,800.88.

Revenues derived from the conduct of business operations under the Panama canal totaled $17,530,214.63. Expenses of operation, including plant depreciation, totaled $16,973,119.19, leaving a net profit of $557,095.44.

Net Return About Two Per Cent

Combined revenues accruing from the operation of the canal and its business units totaled $11,751,896.32. The total capital investment, including compound interest on construction funds, was $533,106,009.47 at the close of the fiscal year. Net receipts of $11,751,896.32 consequently represent a return of slightly over 2 per cent on the capital invested.

The foregoing figures do not include the result of operations carried on with Panama Railroad Company funds. The gross receipts from sales and services furnished by the various divisions of the Panama Railroad, exclusive of the Panama Railroad Steamship Line, amounted to $12,739,350.41. Expenses totaled $12,014,442.32, leaving a net revenue accruing from Panama Railroad operations on the Isthmus of $724,908.09. Adding thereto interest, exchange, and miscellaneous profit and loss items amounting to $57,556.40, resulted in a net income of $782,464.49 for the year.

The Panama canal, under the administration of Governor Harry Burgess, who recently resigned, has been one government institution that has not tried to state its financial reports in such a way as to present as rosy a picture as possible. During the year the accounting system of the canal was modified in accordance with recommendations of the governor to the Secretary of War, which were also recommended by the Bureau of Efficiency and approved by President Hoover to re-include in the capital accounts part of the cost of construction of the canal amounting to $113,127,337 which was written out of the accounts in 1922 by direction of the then Secretary of War, upon the recommendation of a special commission, and charged to "national defense capital investment" as distinguished from "commercial capital investment."

Governor Burgess had stated that this action was without sufficient justification and that the matter of the proper capitalization of canal costs has become of primary importance in the discussion of proposed legislation relating to canal tolls. Whereas the 1931 reports stated that commercial capital investment at $273,273,818 and the national defense capital investment at $113,127,337, the 1932 report carries a total of $386,910,301 as appropriations for canal construction to June 30, 1921, and adds among other items $143,652,360 of interest on construction funds (compounded annually) 1904 to 1921, making a total capital investment of $533,106,009. On this the net revenues for the year fell short of meeting a 3 per cent interest charge by $4,162,482.

The report also includes an argument as to "the essential justice of charging tolls at approximately the present level, or slightly higher", pointing out that 53 per cent of the tolls are paid by foreign ships and that a lowering of the tolls would constitute a subsidy to foreign shipping. It also says that "as a matter of national policy, the effect of lower canal tolls on the railroads should be given careful consideration."

Shall We Deliver the Goods?*

Motorization of terminals, to speed up deliveries and effect operating economies, should be considered

By J. R. Turney

Vice-President, Law and Traffic, St. Louis Southwestern

THE experiment of the southwestern lines in giving store-door delivery of l.c.l. freight during the past year has proved a magnificent success or a miserable failure, depending upon the source of your information. With respect to this question, the southwestern carriers, like all Gaul, are divided into three parts. The first part were and still are convinced that the scheme is a hare-brained method of increasing carrier deficits. It was inevitable that they should accept the tariffs as a mere change in routine, depend upon draymen to advise the public of their provisions, and let time justify their worst convictions. It has. The second class set about the experiment enthusiastically in the belief that, with store-door delivery, a magic incantation had been found by which trucks could be forever exorcised. They have been disappointed. The third believed it essential to advertise the new service and supplement it not only with an active solicitation but by improved handling. On the whole, the last group of carriers is satisfied but not contented with results. With us, the service has far more than paid for itself. While it falls far short of solving all of the truck problems, store-door delivery has been of unquestionable aid in meeting the tribulations of the past year.

Needed Changes in Store-Door Delivery

The 12 months' test has indicated that several changes ought to be made. The tariff tends to emphasize the contention that the service was grudgingly extended, and only because of truck competition. The area within which the service is given is narrowly limited, the mechanics and conditions of the service are complicated, the allowances tend to create discrimination and to increase the cost and the tariff which provides the service is difficult to interpret.

We are beginning to realize that complete transportation of merchandise from door to door was demanded, not by truck competition, but by the requirements of modern business. Economic need would inevitably have brought about the service by railroad, even if the trucks had not first sensed and met the demand. If the delivery of goods be viewed as an indispensable part of transportation service, all restrictions as to distance, as well as all allowances, will be lifted, and the service will be absorbed into transportation, wholly divorced from special charges or practices.

The railway rate will embrace carriage from door to door instead of from station to station. This does not mean that this or any other service should be gratis, but that door delivery should be universally accorded and compensation for it included in the standard rates, which may be the same, or higher, or lower than present rates.

What is true of merchandise traffic is equally true of carload traffic. It is difficult to see why our service should embrace only the middle of the movement. It is easy to understand the difficulties which would have been encountered in giving door delivery in the pre-motor age, but the conditions of that age no longer exist. Three demands of industry in a short time will force door delivery of carload traffic: More expeditious service, removal of discrimination against off-track shippers, and reduction in terminal delays and expense.

Make Competition, Not Merely Meet It

If railroads are to anticipate the service needs of industry, they must make competition, not merely meet it. A few years ago the railroads were handling over 85 per cent, in 1929 less than 70 per cent, and today probably less than 60 per cent, of the nation's available business. The growth of pipe and transmission lines, the renaissance of water transportation, largely subsidized, and the unparalleled growth in motor truck carriers are responsible for these conditions. We can, and to exist we must, out-service and undersell all of these competitors.

If we visualize truck competition as being limited to l.c.l traffic, we are due for a rude awakening. A recent study at one of the large southwestern cities indicated that between 10 and 20 per cent of the carload traffic is being received and forwarded by truck. The truck's success will generally be found to be due to one or more of three elements: Lower rates, lower minimum weights, or expedited delivery.

A substantial part of the off-track shipper's transport cost lies in the transfer of his freight between track and warehouse, which usually amounts to $10 per car and sometimes to several times that much. Therefore, when an off-track shipper uses a truck carrier at the rail carload rate, he gets service at a much lower over-all cost. The importance of this difference in transport charges should not be overlooked in appraising ways and means of meeting our new competition.

Generally speaking, off-track patrons deal in a higher grade of goods, and from a freight rate standpoint in higher rated articles, than the on-track shippers. The latter are in most cases handlers of bulk commodities. It is with respect to this high-rated traffic, the cream of the business out of which we must make our profit, that the trucks are making their greatest inroads. Their success in this field is due in no small measure to door delivery. Without reducing our rates and, in many cases as we shall see, without substantially increasing our costs, we can overcome or greatly reduce the handicap of lower freight rates by delivering the goods.

Problem of Low Minimum Weights

Store-door delivery will make possible the solution but will not solve the problem of lowered minimum weights which are available by truck, and which the railroads cannot give with their present equipment without a substantial increase in operating cost due to less ef-

* From an address delivered before the Chicago Traffic Club at Chicago on November 21.

ficient train loading. If and when the railroads adopt demountable bodies interchangeable with truck chassis —call them what you will, containers, trailers, car bodies or truck bodies—this handicap can be overcome; and at the same time the cost of handling the lading from the car to the truck, which constitutes over 50 per cent of the cost of store-door delivery of carload freight, can be eliminated.

Expedited delivery undoubtedly ranks as the chief reason why truck service is preferred by so many of our former customers. On the line haul, the train's potential over-all speed of 30 miles per hour over its private roadway between terminals, is superior to the potential speed of the trucks, which is not much over 20 miles per hour. Despite this potential advantage, the actual elapsed daily run of the freight car is less than half of that of its truck competitor. It is the case of the hare and the tortoise. Out of every 24 hr. which elapses from the time the railroad takes the car after it is loaded until it delivers it for unloading, an average of at least 18 hr. is spent in and around terminals, and but 6 hr. on the road.

Long Terminal Delays

In large industrial districts, such as Chicago and St. Louis, for instance, it frequently takes as long to get a car into a train as it does to move it 400 or 500 miles in line-haul service. If the car is to be switched to and from an industrial siding, particularly one located upon another railroad, delays of 24 hr. are taken as a matter of course, and those of 48 hr. and even as much as 96 hr. are not unusual. So long as we cling to switch engines and cars, this delay in large part will continue unavoidable, since our switching trains are limited to one track, are compelled to operate through highly congested yards and industrial areas, and must run across and frequently along densely traveled streets, and on more or less infrequent schedules.

On the other hand, the truck, not so handicapped, keeps moving all the time, and upon arrival drives directly to the consignee's door, delivering the goods in less time than it takes to classify the rail car.

Store-Door Delivery of Carload Freight

During the past four or five months, operation under an experimental tariff, providing for the store-door delivery of carload traffic by the use of trucks at terminals, has demonstrated that truck delivery of single units of carload freight in lieu of switching will not only greatly expedite the movement but in some cases will substantially reduce terminal costs. The average time required for delivery, including the transfer of the lading from the car to the truck and from the truck to the consignee's dock, is four hours, compared with a former average terminal delay of three days. One-half of this time is required for the transfer from the car to the truck, an operation which would be made unnecessary by the use of interchangeable equipment. The time required for the railroad to handle the shipment in the terminals under this method is little, if any, longer than that required by the highway truck, while the time of its line haul movement is substantially less. Hence, store-door delivery by truck enables the railroad not only to overcome the present speed handicap under which it labors, but in many cases to out-service the truck.

The service of industrial tracks by railroads is nothing more or less than the store-door delivery of carload freight. It costs a substantial amount to effect delivery on an industry track, particularly if, in order to reach it, switching charges of one or more connecting railroads must be absorbed. This cost averages from $9 to $13 per car in our territory, and sometimes aggregates as much as $25. Since the off-track shipper pays the same rate as the on-track shipper, he bears a part of this transportation expense, although the entire benefit goes to the latter. The practice of giving carload delivery to the class of shippers who have industry tracks, and refusing to give it to those who have not, is a discrimination against one class of shippers and a preference for others. It was legally an excused discrimination so long as it was impossible to afford the service to all alike, due to the difference in their facilities. Now that modern facilities enable us to afford precisely the same service to the off-track shipper for the same cost, it will become increasingly difficult to defend the difference in service.

The claim is made that to furnish the off-track shipper free delivery discriminates against the on-track shipper, since the latter has gone to considerable expense in providing his industrial tracks; and, therefore, the suggestion is made that the door delivery by truck should be limited to the on-track shippers. The Supreme Court of the United States has held this to be unlawful discrimination upon the obvious ground that the existence or not of an industrial track has nothing to do with delivery by truck. It may be that in time the extension of delivery service will cause many industrial tracks of shippers to become obsolete. If so, they will not be the first thing which the motor vehicle has made obsolete.

Can Service Be Extended

The level of freight rates is fast being forced down to the new price levels, not only by economic pressure and the demands of our foreign commerce, but also by competition with other means of transport. Most of us will agree that the rate level cannot be lowered without a radical and permanent reduction in the cost of rail operation. The question arises, therefore, whether the railroads can afford to extend this service. The answer is two-fold: First, from a service-need standpoint, we cannot afford not to give it; and second, its extension will tend to reduce rather than increase present terminal expenses.

The line haul cost per loaded car per mile on American railroads is 15.7 cents; or, equated for empty haul, 10 cents per total car-mile for an average load of about 50,000 lb. The line haul cost of trucks, including operation, maintenance, investment, depreciation, taxes and overhead expenses, but excluding terminal expenses, is between 15 and 20 cents per vehicle mile. Due to the difference in state laws and regulations, as well as to lack of data, it is not possible accurately to compute the average truck load. If the load is 25,000 lb., the line haul cost of moving a carload of freight by truck is between 30 and 40 cents per equivalent freight car-mile. If the average be 15,000 lb., the equivalent car-mile cost rises to between 50 and 75 cents. The line haul cost of moving a carload of freight by rail is, therefore, at least 20 cents per mile less than that of the truck. In a haul of 200 miles, this difference aggregates $40 per car.

Terminal service costs the American railroads about $25.40 per loaded car, for both terminals. If we estimate that the truck operator's terminal cost is something less than $3 per car, we find that the railroad's line haul advantage of $40 is reduced by a saving of between $20 and $25 at terminals, leaving a net railroad advantage of from $15 to $20 per car.

Extra Cost Offset by Economies

The cost of delivering carload traffic by truck, under our experimental tariff, has averaged $6 per car, or less

than half the former average switching cost. Of this $6 cost, over $3 per car represents the expense of transferring the lading from the car to the truck, which would be saved by the use of interchangeable bodies. In fact, in many cases the saving in per diem alone equals the delivery cost. Our experience so far indicates that the cost of rendering the service to the off-track shipper will be offset by the terminal economies which the practice permits. Contrary to our anticipations, the cost at the largest city where the practice is in effect (Little Rock, Ark.) was lower than at smaller points. This was due to the fact that the service was performed by our solely-owned subsidiary instead of by contract. At cities whose population aggregates a million or more, we anticipate that relatively higher costs will be encountered, particularly when delivery is made to the outlying plants. Whether or not these costs will exceed comparable switching expense can only be determined by actual test at each point. We are so well satisfied with the experiment that, if permitted to do so, we shall make this test.

In the case of multiple car deliveries, particularly of bulk freight, switching is still much the cheaper operation and will continue to be at least until the day of interchangeable equipment. Carload delivery of freight is not a magic talisman. It does not of itself solve the truck problem, but it does mark one further step toward integrating transportation with the needs of industry.

The limitation of the railroad's single roadway, the size of its train crew which prevents economical handling of single units, the congested commercial and industrial areas through which the railroad operates, and the high cost of acquiring urban lands and facilities, all require that the feasibility of motorizing terminals be considered. In the years ahead, the day will come when our trains, like ocean steamers, will arrive at and depart from outer docks or yards, and, without switching, discharge or receive interchangeable car bodies to or from a fleet of trucks, which will quickly and economically perform the terminal service of collection and distribution. That day now seems far distant, but I have no doubt that it will come.

Development Association Meets

APPROXIMATELY 75 per cent of the railroad employees' ticket was elected to the state general assembly and approximately 82 per cent to the state senate in the September election in Georgia, as a result of the formation of the Association of Railway Employees of Georgia, according to an address made by E. S. Center, Jr., general agricultural agent of the Atlanta & West Point, at the semi-annual meeting of the American Railway Development Association at Chicago on December 1-2. The meeting, over which President C. A. Radford, publicity manager of the Cleveland, Cincinnati, Chicago & St. Louis, presided, was arranged to provide for a general session each morning to discuss subjects of wide interest and departmental sessions each afternoon to consider agricultural and industrial problems such as the Back to the Land movement, the Contract Feeding of Sheep and Cattle, Real Estate Development and Unloading or Loading Devices Temporarily or Permanently Located on Railroad Property.

Mr. Center outlined the accomplishments, aims and purposes of the Georgia employees' organization, showing that it has developed, since its organization in Augusta, Ga., on March 16, 1932, from 6 clubs into a total of 43 clubs with a membership of 50,000 persons, the majority of whom are qualified voters. To accomplish its objectives, the association has entered into state politics, first by writing every candidate for the office of state legislator and senator to determine what his position would be toward enacting legislation that would give the railroads an even break. Approximately 95 per cent of these candidates answered in writing to the effect that they thought a just and equitable basis should be worked out and laws enacted, which would give equal rights to all with special privileges to none. Bills are now being prepared to supersede the present inadequate laws, and these bills will be introduced when the new legislature convenes shortly after the first of the year.

Another speaker on the program, Bruce Dwinell, general attorney of the Chicago, Rock Island & Pacific, spoke on water transportation, comparing the value of rail and water transportation. He showed that the reliability of rail service exceeds that performed by the barge lines on the Mississippi river, since in the handling of traffic, the barge lines do not move freight until enough to comprise a tow is collected. Consequently, a ton of freight delivered by a shipper may wait a week before it is moved. He also pointed out that the railroads of the United States can, by reason of their connections with each other, transport freight from any point to any other point, whereas the Federal Barge Line, by reason of its physical limitations, is unable to transport freight except between the river ports. In addition, he called attention to the expenditures required by the railroads to make streams navigable, citing as an example, the Sag Channel, in which instance the railroads are required to expend $117,000,000 for rebuilding bridges, which expenditure will add $750,000 annually to railroad operating costs. As a result of the construction of the Sag Channel, he contended, the city of Chicago bears $1 of the cost per ton of moving freight on the channel, while the value of the freight is only $1.65 per ton.

A system of regulation to bring about a fair basis of competition and a co-ordinated system of transportation was favored by Henry A. Palmer, editor of the Traffic World. To accomplish such a condition, he contended that transportation charges of all forms of transportation should be based upon costs, including, in the case of waterways, rental for the facilities used. He favored the development of only that water transportation that can be economically justified and urged further exploitation of door to door pick-up and delivery service, extended use of motor coaches in passenger service and a consideration of the possible substitution of trucks for switch track delivery of freight.

Others addressing the meeting included W. H. Bremmer, receiver of the Minneapolis & St. Louis, who discussed taxes; E. H. McReynolds, director of publicity and advertising of the Missouri Pacific, who spoke on Development Publicity and Dr. Allen D. Albert, assistant to the president of A Century of Progress Exposition, who described the progress being made in developing the exposition to be held next year.

PLANS FOR THE CONSTRUCTION of a railway bridge across the Narbada river (India), which have been under consideration for some time by the Bombay, Baroda & Central India, have been approved and bids for construction have been called, according to reports received by the Department of Commerce. The bridge will be nearly one mile in length, will require about 13,000 tons of steel, and will take three years to build.

St. Lawrence Waterway Treaty

Senate committee concludes hearings after receiving testimony from treaty advocates

WASHINGTON, D. C.

HEARINGS before the Senate committee on foreign relations on the proposal that the Senate ratify the treaty with Canada providing for the construction of the St. Lawrence seaway were concluded on December 3 after the committee had devoted two weeks to receiving testimony from advocates of the waterway plan, including government officials who have participated in the work on the project. Opponents of the treaty, including the railways and representatives of eastern port cities, had previously testified, although some additional testimony in opposition was also presented before the close.

A large number of middle western commercial organizations demanded approval of the treaty on the ground that it is necessary to offset the disadvantages placed upon them by transportation through the Panama canal in their competition with shippers in the East. However, representatives of the Mississippi Valley Association and the Illinois State Chamber of Commerce, who are more interested in the development of water transportation between the Great Lakes and the Gulf via the Mississippi and Illinois rivers, opposed the treaty in its present form because they feared it would not allow the diversion of sufficient water from Lake Michigan through the Illinois river.

All kinds of enthusiastic predictions were made as to the enormous development of traffic in the Middle West which the various witnesses said would result from completion of the canalization of the St. Lawrence and the possibility of connecting it with coastwise transportation. This they said, would give traffic to the railways to haul to the waterway as an offset against the traffic that would be diverted from them. Many witnesses also criticised the present level of railway rates and particularly objected to proposals to increase western grain rates in the case now pending before the Interstate Commerce Commission.

Railroad Labor Opposes Treaty

Railroad labor went on record in opposition to the seaway treaty in testimony given before the committee on December 2 by D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, speaking on behalf of the Association of Railway Labor Executives. He said that "that which will reduce tonnage on the railroads will reduce jobs for our workers. We contend the railroads can handle the tonnage efficiently and that there is no necessity for taxing the nation's rail companies to build an instrument to destroy them."

Walter Williams of Benton, Ill., president of the Illinois State Chamber of Commerce, urged the committee to send the treaty back to the Department of State for an effort to gain Canadian consent to a greater diversion of water for the Illinois waterway, declaring that those he represented would rather have no treaty at all than one containing the present limitation to 1500 cubic feet per second.

The first witness on the side of the proponents was James Grafton Rogers, Assistant Secretary of State, who had actively participated in the negotiation of the proposed treaty with Canada. He expressed great confidence in the conservatism of the engineering estimates as to the cost and predicted that the waterway would be built eventually, because "it is the sort of thing that nations do." He also said that the economic phases had been thoroughly studied.

Proponents Testify

The next witness was Brig. Gen. George B. Pillsbury, assistant chief of engineers of the Army, who also expressed confidence in the estimate of the Joint Board of Engineers that the cost of the proposed 27-foot channel from the Great Lakes to Montreal, including the proposed power development, would be $543,429,000 and that the share to be borne by the United States would be $272,453,000. He later said that in arriving at the cost, approximately $30,000,000 should be added to cover interest during construction, but said it had not been the practice of the engineer department to include carrying charges in project reports to Congress. He ridiculed some of the higher estimates of the cost presented by some of the witnesses and said that the excess of cost of some other similar projects over the estimates had resulted from the excessive cost of real estate acquired but that the St. Lawrence project does not involve much land. He also said that while the cost of the Panama canal had greatly exceeded some of the earlier estimates it had been built within the estimates made by General Goethals.

General Pillsbury said that the estimate of $712,000,000 for the cost of the St. Lawrence seaway made by the Brookings Institution was based on that of the joint board but increased to provide for a 30-foot channel, whereas he believed 27 feet would be adequate for carrying on a large and important commerce and for realizing important economies, and said that the board had made an estimate of $589,000,000 on the 30-foot basis. He gave it as his "well-considered opinion" that the estimates are amply sufficient provided the normal scale of prices before the depression should prevail. The cost of harbor improvements at the Great Lakes ports which had been estimated by some witnesses at $175,000,000 he said would be borne by the communities interested and that the expenditures by the federal government on this account would not reach any large figure.

General Pillsbury said he was convinced that large ocean vessels would use the proposed channel because they are now using the terminal at Albany and those at Tampa, Fla., and Stockton, Calif., and that his "very informal" studies had convinced him that the project is economically feasible and would make it possible to carry freight at rates far less than those of the railways. When Senator Wagner asked what rail rates he referred to he said he did not know what they were but suggested that the Department of Commerce be questioned on that point since it had made the economic

studies. He said what he had in mind was that the "dominant percentage" of the traffic between the east and west coasts of the United States moves through the Panama canal at less than rail rates and he knew of no reason why similar conditions should not apply on the proposed "direct route" to Europe.

Col. E. M. Markham, division engineer in charge of Great Lakes activities for the Corps of Engineers, said that the estimate of $272,000,000 as the cost for the United States was in his opinion sufficiently liberal to cover the interest during construction, in all probability.

A. Lane Cricher, director of the Division of Transportation of the Department of Commerce, who with E. S. Gregg made the "economic survey" for the department in 1927, said that the survey covered only the traffic available for movement by the waterway, and did not purport to show just how much would actually so move, but he expressed the opinion that such a waterway would develop traffic because it would put the central West in direct touch with coastwise as well as foreign shipping. Some of the senators seemed rather surprised because Mr. Cricher was not in a position to discuss the freight rates that General Pillsbury had referred to him.

Alfred H. Haag, director of research for the United States Shipping Board, said that ordinary shipping practices would permit use of the proposed waterway by ships of a greater draft than 27 feet because ordinarily they do not carry a full cargo.

When one of the witnesses said that 14 feet is now the maximum draft possible for ships using the St. Lawrence route to the Lakes Senator Vandenburg, of Michigan, said that 32 foreign vessels had visited South Haven, Mich., this year.

Arguments in support of the treaty were presented before the committee on November 30 by Governor Wilbur M. Brucker, of Michigan, James P. Goodrich, representing the Indiana section of the Great Lakes Tidewater Association; Hugh J. McClearn, of Duluth; J. C. Beukema, secretary-manager of the Greater Muskegon Chamber of Commerce; Harry E. Boyle, district attorney at Duluth; William N. Pelouze, of Chicago; and several witnesses representing northern New York.

Charles R. Gow, chairman of the Joint New England Committee on the St. Lawrence Waterway, said that New England is now entirely dependent upon the railroads for reaching the interior of the country and that the St. Lawrence waterway would afford an additional and cheaper route. He also said that competition between rail and water routes always tends to reduce rates by the latter agencies.

Middle West Advocates Treaty

Fred S. Keiser, traffic manager of the Duluth Board of Trade, described the damage that he said had been done to the middle West by the construction of the Panama canal and the Interstate Commerce Commission's refusal to allow the railways to reduce rates to meet canal competition, and also by increases in railway rates, which, he said had created a "marooned area" which is now trying to find outlets in other forms of transportation. He said that the railways have increased rates beyond what the traffic will bear, but in reply to previous witnesses who had cited the present low rates for lake transportation he said that they are abnormally depressed. Although several witnesses had stated that wheat can now be carried from Duluth to Liverpool for eight cents a bushel, Mr. Keiser expressed the opinion that a saving of eight cents a bushel as compared with a "normal" rate is a conservative estimate of what can be accomplished by the proposed waterway. He estimated, however, a normal rate from Duluth to Liverpool of 9.67 cents a bushel, which he based on 3 cents added to the rate from New York to Liverpool. He said the people of the middle West are not asking for a subsidy but only that the government do for them as much as has already been done along the Atlantic and Pacific coasts in the way of dock and harbor improvements, in order to give them "a fair break and the benefit of what obviously the Almighty intended for them to have—namely cheap water transportation."

Prospective savings in the transportation of grain were used by Mr. Keiser in two ways. After having used them to increase the prices to be received by the farmers he used them again to increase the sale of export grain and thus to benefit the railroads by increasing their traffic from the grain fields to the waterway. Mr. Keiser also estimated that a water rate of $1 a hundred pounds, first class, could be made for package freight between New York and Duluth, as compared with the present first-class rail rate of $1.62.

Theodore Christianson, formerly governor of Minnesota, described three factors which he said have operated against the Middle West "as a component part of an integral America." One is the Panama canal, which he said had isolated the interior; another is the practice of building rate structures on a mileage rather than a competitive basis, which he said has operated to "submerge the parts of the country remote from centers of consumption," and the third is the general increase in railroad rates, which he said has made the rates to and from the interior "all but prohibitive." He made the point that the Great Lakes carry 92 per cent of the nation's inland waterborne commerce but have received only 11 per cent of the funds appropriated for improvement of harbors and inland waterways, but in discussing probable rates via the proposed waterway he assumed a cost of transportation about as low as present rates via the lakes or for ocean transportation.

Cleveland A. Newton, general counsel for the Mississippi Valley Association, opposed the present form of the treaty because it limits the volume of water that may be diverted from Lake Michigan for the Illinois waterway. When Senator Borah remarked that if this treaty is rejected he had the conviction that Canada would never give us another one, Mr. Newton replied that he thought "our people would much prefer its rejection, because we cannot see where a treaty that limits water diversion into the Illinois river is going to do anything but harm for us of the Mississippi Valley, no matter what benefits otherwise are to come from the St. Lawrence project."

F. G. Kirkbride, representing the Northern Federation of Chambers of Commerce of New York State, said that the northern and eastern sections of the state expect a widespread industrial development as the result of cheap power generated on the St. Lawrence.

Julius H. Barnes, former president of the Chamber of Commerce of the United States, told the committee that the St. Lawrence river constitutes one of our greatest undeveloped national assets and urged construction of the waterway "not only as a worth while peace-time economic project but as a great weapon in case of war." He said it was his profound conviction that America's part in the world war would have been greatly simplified if we had had this waterway and that history has shown that such projects are always used to a far greater ex-

tent than could be foreseen ahead of time because tonnage develops from sources impossible to foresee. He took the position that entrance of ocean vessels into the Great Lakes would not be at the expense of existing shipping but would result in the development of new tonnage.

H. H. Rice and H. M. Robins, representing the Detroit Board of Trade, gave estimates that the waterway would make possible savings in freight on export shipments amounting to $15,000,000 a year and said that automobile exports would be greatly facilitated by the possibility of direct shipments without transfers.

Other witnesses in support of the treaty included: Governor George F. Shafer and Senator Frazier, of North Dakota; Herman L. Ekern, representing the governor of Wisconsin; Gilbert Bettman, attorney general of Ohio; Henry M. Benson, attorney general of Minnesota; A. C. Carton, of the Michigan Department of Agriculture; A. O. Moreaux, of Laverne, Minn., representing the Great Lakes-Tidewater Association; George E. Hardy, chairman of the Ohio Waterways Commission; James E. Davidson, vice-president of the American Shipbuilding Company; Elbert H. Baker, publisher of the Cleveland Plain Dealer; Perry W. Jenkins, representing the governor of Wyoming; and R. S. McElwee, consulting engineer, of New York.

Supreme Court Sustains Texas Contract Truck Law

WASHINGTON, D. C.

PROVISIONS of the Texas motor vehicle law which provides for regulation of contract motor carriers, including the prescription of minimum rates not less than those prescribed for common carriers, and the requirement of permits, were upheld by the Supreme Court of the United States, in a decision rendered on December 5, as a constitutional exercise of the legislative power of the state to regulate the use of its highways and to conserve them. The decision, by Justice Sutherland, affirmed the decision of the district court for the southern district of Texas which had denied an injunction sought by a number of contract carrier operators who appealed to the higher court.

Finding that it was unnecessary to determine whether the operation of trucks for the transportation of freight under private contracts on the public highways is a "business impressed with a public interest," the court held that it was enough to support the validity of the statute that "plainly, one of its aims is to conserve the highways" and that the provision for minimum rates "by precluding contract carriers from rendering service at rates under those charged by the railroad carriers has a definite tendency to relieve the highways by diverting traffic from them to the railroad." After citing parts of the decision in the lower court Justice Sutherland said in part:

These and other findings and the evidence contained in the record conclusively show that during recent years the unregulated use of the highways of the state by a vast and constantly growing number of private contract carriers has had the effect of greatly decreasing the freight which would be carried by the railroads within the state, and, in consequence, adding to the burden upon the highways. Certainly, the removal or amelioration of that burden, with its resulting injury to the highways, interference with their primary use, danger and inconvenience, is a legitimate subject for the exercise of the state legislative power. And that this was one of the chief ends sought to be accomplished by the provisions in question, the record amply establishes.

The assailed provisions, in this view, are not ends in and of themselves, but means to the legitimate end of conserving the highways. The extent to which, as means, they conduce to that end, the degree of their efficiency, the closeness of their relation to the end sought to be attained, are matters addressed to the judgment of the legislature, and not to that of the courts. It is enough if it can be seen that in any degree, or under any reasonably conceivable circumstances, there is an actual relation between the means and the end.

Turning our attention then to the provision for permits, it is to be observed that the requirement is not that the private contract carrier shall obtain a certificate of public convenience and necessity, but that he shall obtain a permit, the issue of which is made dependent upon the condition that the efficiency of common carrier service then adequately serving the same territory shall not be impaired. Does the required relation here exist between the condition imposed and the end sought? We think it does. But in any event, if the legislature so concluded, as it eventually did, that conclusion must stand, since we are not able to say that in reaching it that body was manifestly wrong.

Debatable questions of this character are not for the courts, but for the legislature, which is entitled to form its own judgment. Leaving out of consideration common carriers by trucks, impairment of the railway freight service, in the very nature of things, must result, to some degree, in adding to the burden imposed upon the highways. Or stated conversely, any diversion of traffic from the highways to the railroads must correspondingly relieve the former, and, therefore, contribute directly to their conservation. There is thus a substantial relation between the means here adopted and the end sought.

What has just been said applies in the main to the other challenged provision authorizing the commission to prescribe minimum rates not less than those prescribed for common carriers for substantially the same service. This provision, by precluding the contract carriers from rendering service at rates under those charged by the railroad carriers, has a definite tendency to relieve the highways by diverting traffic from them to the railroads. The authority is limited to the fixing of minimum rates. The contract carrier may not charge less than the rates so fixed, but is left free to charge as much more as he sees fit and can obtain. Undoubtedly, this interferes with the freedom of the parties to contract, but it is not such an interference as the Fourteenth Amendment forbids. While freedom of contract is the general rule, it is nevertheless not absolute but subject to a great variety of legitimate restraints, among which are such as are required for the safety and welfare of the state and its inhabitants. When the exercise of that freedom conflicts with the power and duty of the state to safeguard its property from injury and preserve it for those uses for which it was primarily designed, such freedom may be regulated and limited to the extent which reasonably may be necessary to carry the power and duty into effect.

Here the circumstances which justifies what otherwise might be an unconstitutional interference with the freedom of private contract is that the contract calls for a service, the performance of which contemplates the use of facilities belonging to the state; and it would be strange doctrine which, while recognizing the power of the state to regulate the use itself, would deny its power to regulate the contract so far as it contemplates the use. Contracts which relate to the use of the highways must be deemed to have been made in contemplation of the regulatory authority of the state. The principle that Congress may regulate private contracts whenever reasonably necessary to effect any of the great purposes for which the National Government was created, applies to a state under like circumstances.

The Texas statute rests definitely upon the policy of highway conservation, and the provision now under review is governed by the same principle as that which recognizes the authority of a state to prescribe the conditions upon which it will permit public work to be done on its behalf. Regulations on this subject suggest only considerations of public policy. And with such considerations the courts have no concern.

We need not consider whether the act in some other aspect would be good or bad. It is enough to support its validity that, plainly, one of its aims is to conserve the highways.

Nor do we find merit in the further contention that the act arbitrarily discriminates against appellants because it does not apply to persons, commonly known as "shipper-owners," who are transporting their own commodities under substantially similar conditions. It is obvious that certain provisions of the statute, like that requiring the commission to fix minimum rates, can have no application to such owners. We are of opinion, from an examination of the act and the companion act which was upheld by this court in Sproles v. Binford, supra, that all provisions relating to contract carriers which are germane to shipper-owners are made applicable to them. In any event, it is not shown that the act thus far has been so administered as to result in any unlawful discrimination.

Justice Butler dissented.

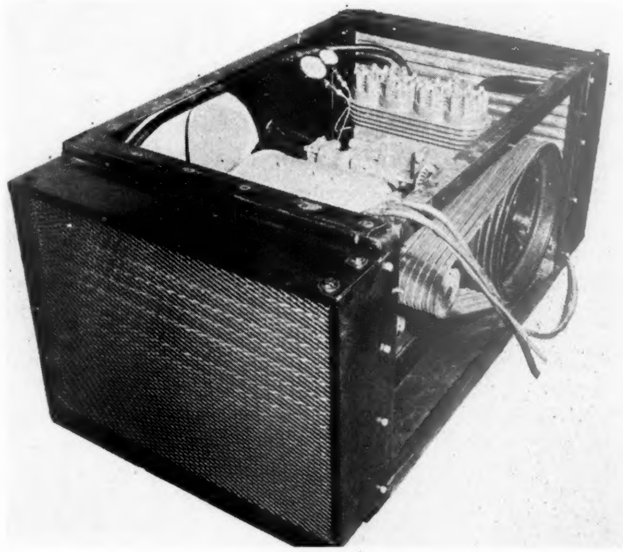
Frigidaire Enters Air-Conditioning Field

Introduces equipment designed for installation in existing cars with a minimum of structural alterations

AFTER more than a year of experimental work in the field of air conditioning for railway equipment, the Frigidaire Corporation, Dayton, Ohio, refrigeration subsidiary of General Motors, this week announced its entrance into the railroad air-conditioning field with the introduction of complete air-conditioning equipment for sleeping cars, club and observation cars, dining cars and coaches. The new Frigidaire air-conditioning equipment is a joint development of General Motors Research Laboratories, Detroit, and the Frigidaire Engineering Division in Dayton. This equipment represents the adaptation of 16 years' experience with mechanical refrigeration to the railroad field, and is the direct result of laboratory research and actual service experience on test cars operated in all parts of the country.

The air-conditioning equipment is so designed that it may be used as a duct or a ductless system. In the development of this equipment, Frigidaire has had as its objective the provision of equipment with sufficient flexibility that it is possible to use standard units for all types of cars from coaches with large carrying capacity to compartment sleepers which carry only a dozen or more persons. The equipment is of such type that installations will be made in the regular shops of railroad companies so that regular railway maintenance employees can benefit by the installation work.

No ducts are necessary except in the case of all-compartment cars. The elimination of the need for ducts in turn eliminates the necessity for expensive structural



The Compressor and Condenser Is a Compact Unit Designed for Suspension Beneath the Car Underframe

A Pullman Installation in a Small Compartment

alterations in existing cars. The system localizes the cooling effect in each section so that odors and smoke from one section are not drawn through the entire car. However, the cooling coils are designed in such a way that they are applicable either to the duct or the ductless system, depending upon which may be desired by the individual railroad.

The mechanical unit consists of a four-cylinder compressor with an integral air-cooled condenser producing five tons of refrigeration when driven by a 7½ hp. motor and seven tons when a 10-hp. motor is employed. The mechanical unit is enclosed in an oblong housing designed for suspension beneath the car underframe. Both compressor and motor are readily accessible for routine servicing. By suspending the compressor unit beneath the car, the necessity for permanently blocking vestibules is eliminated. The Frigidaire air-conditioning system utilizes the refrigerant Freon or F-12 developed by the Frigidaire laboratories and manufactured by Kinetic Chemicals, Inc., a subsidiary of E. I. du Pont de Nemours & Co. The refrigerant is carried from the compressor underneath the car to coils installed in the bulkheads by small refrigerant lines that are invisibly and easily installed without alteration of the car structure.

In the case of a standard sleeping car of 10 sections, one drawing room and two compartments, the manufacturers of this equipment recommend two large coils for installation in the bulkheads at the ends of the main section of the car and smaller coils for the drawing room, compartments, and dressing rooms. Fans behind the coils force the air through the cooling coils and grilles that deflect the conditioned air in the proper direction.

Provision is made for the introduction of new air to be mixed with the recirculated air. Excess humidity is reduced by condensing moisture as the air passes through the cooling coils. Road tests have indicated that this method produced no objectionable draft at any point

in the car and that comfortable conditions can be maintained in the berth whether the train is stationary or in motion.

The estimated refrigeration requirement for a sleeping car operating under maximum heat and humidity conditions is five tons and the same amount of refrigera-

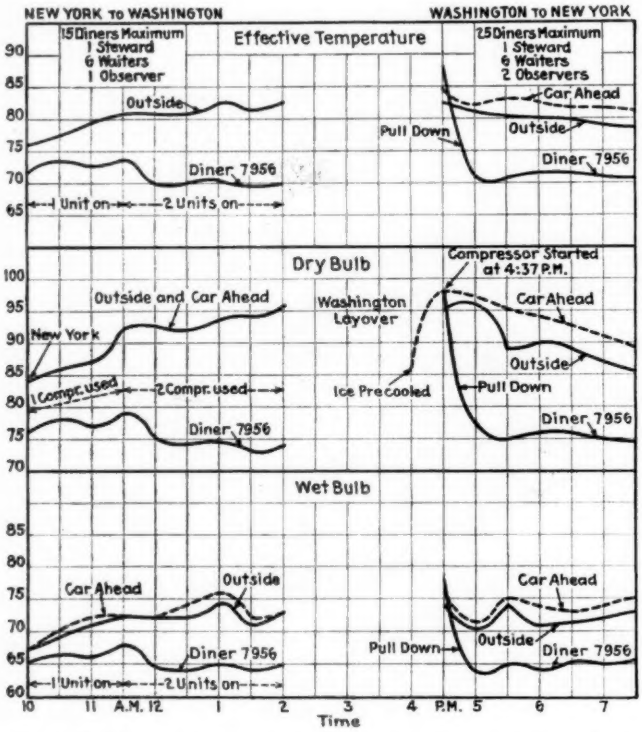


Chart Showing Temperatures of Atmosphere Outside and Inside of Air-Conditioned and Non-Air-Conditioned Cars on the Pennsylvania Between New York and Washington

tion is required for a diner with a seating capacity of 36 passengers and a crew of six. In the case of diners, the kitchen is not air conditioned mechanically, but a curtain of cool air between the kitchen and the dining room is maintained of sufficient magnitude effectively to prevent any infiltration of food odors from the kitchen. This method is said not only to provide a barrier to airflow between the dining space and the kitchen but also helps to cool the kitchen to a temperature several degrees below that normally experienced.

Modern day coaches with a passenger capacity of 70 to 80 persons are estimated to require approximately seven tons of refrigeration under maximum conditions and the Frigidaire compressor unit is designed with sufficient capacity to meet these requirements. The Frigidaire equipment is supplied by the manufacturer ready for installation by the railroads in their own shops and by their own employees. Since all the equipment is standard, mechanical units and coils are interchangeable, making it possible to keep replacement stocks at a minimum.

All cars using this equipment will be equipped with thermostatic control, making it possible for the equipment to function properly on runs on which cars go from one extreme of temperature to another.

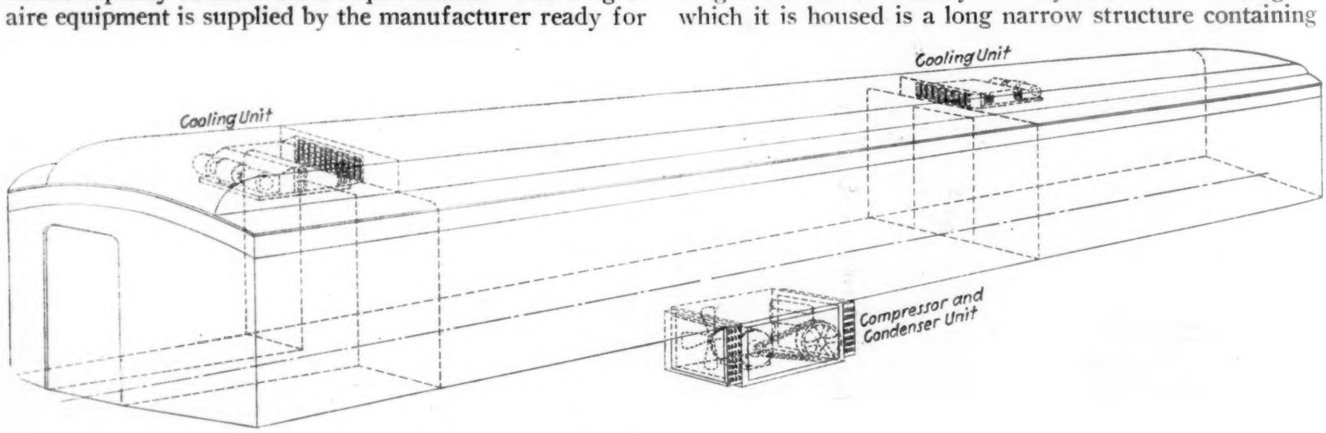
In anticipation of the desire of passengers for the addition of moisture in the winter time and for light heating in the fall and the spring, when it is not desirable to use the ordinary steam heating of the car, the coil and fan assemblies are so designed that a small heating coil and a steam jet may be installed and the air circulated by the regular blowers. The control of humidification by this equipment is designed to overcome the abnormally dry and uncomfortable indoor atmospheric conditions and will, at the same time, lower the steam requirements for heating.

Preliminary Research and Tests

During the past month a Pennsylvania Railroad dining car, No. 7956, was taken off its regular run between New York and Washington after about 27,000 miles of service. This diner has been in use for some time as a test car on which engineers of the Frigidaire laboratories have been experimenting with the possibilities of light-weight air-conditioning equipment built into existing rolling stock. The car was completely air conditioned without any changes to its construction other than minor cutting of the bulkheads since no additional insulation and no ducts were used.

The equipment used on this car differs from the new Frigidaire air-conditioning unit in that it consists of two 2½-ton capacity Frigidaire compressors placed in the steward's linen closet and air cooled condensers with separate motor-driven fans slung beneath the car underframe in line with the battery box. Two cooling coils are placed behind the bulkhead partitions at either end of the car. Outlet grilles are provided for the cool air ahead of each coil and return grilles at the rear of each coil for recirculated air. Multivane blowers send the air through the blowers and a regulated amount of fresh air is drawn through filters by the main blowers. It is said that although the car was in daily use and the equipment functioned day after under summer heat and humidity, the original charge of the refrigerant, Freon, or F-12 has not been replenished. The car travelled approximately 27,000 miles in service with no other attention given it than normal routine inspection.

This dining car is located at the present time at the Frigidaire test laboratory at Dayton. The building in which it is housed is a long narrow structure containing

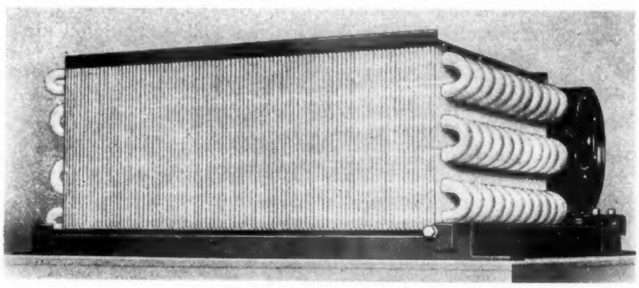


Schematic Drawing of the Frigidaire Air-Conditioning Equipment

equipment for the purpose of heating and humidifying the laboratory atmosphere so that the extreme heat and humidity of Florida, Louisiana and other southern states can be reproduced. At times the temperature outside the car, in this building, is raised to a maximum of 105 deg. and the relative humidity to 80 per cent. Inside the car electric lamps are strung in sufficient number to equal the body heat of 43 persons plus the heat load of the sun. Electrically heated pans of water are placed in the center of the car to represent the humidity load from body perspiration. Wet and dry bulb thermometers, anemometers and other temperature and air movement gages are placed in strategic places so that accurate readings can be made.

Preliminary tests were made in this laboratory on this diner and a Pullman sleeping car before the car was put out in actual road service between New York and Pittsburgh and New York and Washington. The chart shows the relative temperatures under operating conditions on actual runs in the above territory.

The power for the operation of the two compressors used in the experimental equipment in this dining car is supplied by a 15-kw. axle generator in conjunction with an 800-amp.-hr. storage battery. The electrical lines to the compressors are carried from the battery box through a single conduit. The energy stored by the batteries is sufficient for the operation of the air-conditioning equipment before the train starts and at times when the train is standing in the station, insuring the maintenance of comfortable conditions whether the train is in motion or



One of the Cooling Coils

not. The motors operating this experimental equipment in this diner are rated at 5 hp. each and operate on 32-volt direct current.

The new unit type equipment described in the first part of this article is the direct result of the experimental work done on Pennsylvania diner No. 7956. All of the operating parts, except the refrigerant lines and cooling coils, are suspended beneath the underframe of the car. The total weight of the air-conditioning equipment, exclusive of generators, storage batteries and cooling coils is 2,405 lb.

A Sunday Sight-Seeing Train, accommodating 285 passengers, is the latest innovation on the Austrian State Railways, according to reports received by the Department of Commerce. The train consists of four open observation cars and one ordinary passenger car, with the locomotive at the rear to eliminate smoke and cinders. The route selected for the first service of this type, operated on October 9, was between Vienna and the Semmering, the regular Vienna-Gloggnitz train being used, with transfer to the sight-seeing train at the latter point. During the scenic trip, which lasted (one way) almost four and one-half hours, 16 viaducts were crossed and one tunnel traversed, all at slow speed, with 10 stops. The round-trip excursion fare was only 12 schillings (about $1.70), compared with the regular second-class fare of 48.4 schillings.

Wisconsin Central in Receivership

THE Wisconsin Central, operated and controlled by the Minneapolis, St. Paul & Sault Ste. Marie and operating 1157 miles of line in Wisconsin and Illinois, was placed in voluntary receivership by the United States district court at Minneapolis, Minn., on December 2, following a hearing before Judge J. W. Molyneaux. A. E. Wallace, vice-president, general manager and a director of the Wisconsin Central and of the Soo Line, was appointed receiver of the former. The failure of the Wisconsin Central in recent months to earn enough money to pay either its operating expenses or its bond interest and other fixed charges was given as the reason for the receivership, in a statement by C. T. Jaffray, president of the railroad. The company has a funded debt outstanding in the hands of the public in the amount of $34,000,000 and preferred stock to a total of $11,265,900. Common stock of $100 par value is outstanding in the amount of $16,126,300. For several years the railroad has been unable to pay preferred dividends on its four per cent issue, the last distribution having been made in 1921. No dividends have ever been paid on the common stock.

The financial statement for the year ending December 31, 1931, showed a net loss for the year of $2,962,972, following a loss in 1930 of $2,287,370. Losses have been sustained in every year since 1925 and have been mounting steadily except in 1929, when a deficit of $159,740 was reported, comparing with a loss of $822,302 in 1928. The company's revenues in the last two years have been barely sufficient to meet operating expenses, and this year it has been impossible for the road to show any margin of net income after allowing for its daily expenses. In addition to this inability to meet running expenses, the depletion of surplus account necessitated a receiver. In its application to the Minneapolis court, the company cited its inability to meet bond interest and other fixed charges and the court accepted this claim as grounds for the receivership.

The company's lines tap many communities in Illinois and Wisconsin, extending from Chicago to Milwaukee, Wis., Manitowoc, Fond du Lac, Oshkosh, Eau Claire and Minneapolis, Minn. It was chartered on December 24, 1887, in Wisconsin, and on July 13, 1889, acquired title to the property of several other companies. On April 1, 1909, the Minneapolis, St. Paul & Sault Ste. Marie purchased $8,100,000 of common stock in the Wisconsin Central and by agreement with owners of the majority of the preferred stock of that company there was effected an exchange of Soo "lease line certificates" for Wisconsin Central preferred stock. By terms of the agreement, the Soo Line leased the property of the Wisconsin Central for 99 years and agreed to pay four per cent per annum on the certificates. On January 17, 1924, the Soo Line entered into a contract with the minority stockholders, whereby it agreed to buy the outstanding minority stock of that company deposited prior to April 1, 1924 at $43.25 per share. As a result of both of these offers, the Soo Line acquired $11,249,500 of preferred and $7,873,600 of common stock. Since July 1, 1909, the Wisconsin Central lines have been operated as the Chicago district of the Soo Line.

The Transandine Railway, connecting Argentina and Chile, which was temporarily abandoned last spring, has resumed operations, following the signing of a commercial agreement between the two countries.

Odds and Ends . . .

It's an Ill Wind, Etc.

According to press reports, the depression-ridden citizens of Inverness, Fla., had something substantial to be thankful for on Thanksgiving Day. The derailment of a freight train on the Seaboard Air Line scattered several carloads of fish, vegetables and fruits over the landscape, providing an immediate solution of the town's problem of what to eat.

Try This on Your Automobile

They made a "tire change" in a hurry on the Norfolk & Western recently. When "The Skipper," one of the railway's fast freight trains, pulled into the Roanoke, Va., terminal, one car was found to require a change of wheels. The car was immediately cut out of the train and placed on a shop track. Two pairs of wheels were removed from the car and two new pairs applied, and the car was returned to the train—all in the space of 19 min.

Milwaukee Officer Decorated

Another railway officer has been awarded the decoration of the Order of the Purple Heart, a decoration established by George Washington in 1782, and awarded to persons who, while serving in the army of the United States, perform any unusually meritorious act. The recipient of the decoration, with its accompanying citation from the secretary of war, was Colonel C. L. Whiting, superintendent of the Chicago Terminal division of the Chicago, Milwaukee, St. Paul & Pacific. Colonel Whiting served overseas with the Thirteenth Engineers, was with the first contingent of American troops to be under fire, and saw two years of active service in France.

Another Veteran Cross Tie

According to A. B. Love, assistant editor of the Atlantic Coast Line News, that Illinois Central cross tie which has been in service since 1875—mentioned on this page of the *Railway Age* of November 19—still has some years to go to beat the record made by a tie on the Atlantic Coast Line. This tie was used in the construction of the line of the Wilmington & Weldon Railroad near Teachey, N. C., in 1837 or 1838. The tie remained on the job until 1917, when it was removed from the track, with appropriate ceremonies, and made into a monument in Wallace, N. C. This veteran tie now reposes in the office of the chief engineer of the Atlantic Coast Line at Wilmington, N. C.

Bird Story

A pigeon flew into the Grand Central Terminal in New York one day recently and, before retiring for the night in a dim corner, attracted more attention than a visiting movie star. Squads of station employees, porters, interested commuters and two agents of the S. P. C. A., armed with ladders and kernels of corn, spent just about the whole day in futile pursuit of the bird.

Which reminds the editor of this department of the days, some years ago, when he was selling tickets in the Union Station at Kansas City. At that time one of the high spots of each evening was the moment when one of the porters—an expert marksman—undertook the not uninteresting task of shooting down with an air rifle the balloons which, released by their small owners during the day, had soared upward to the ceiling.

Woman Pump Tender

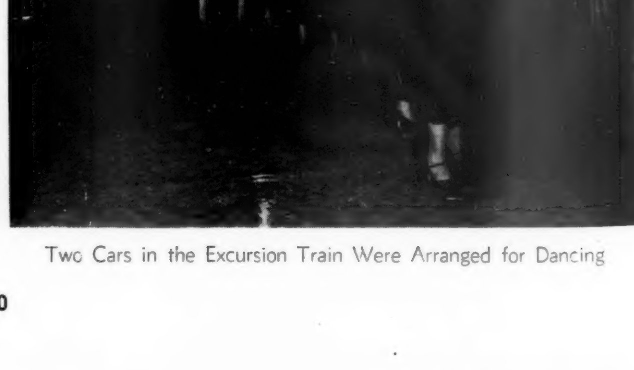
The only woman pumping station operator on the Missouri-Kansas-Texas, if not on any railroad in the United States, is Mrs. J. E. Russell of Crowder, Okla. Back in 1904, Mrs. Russell's father was in charge of the pumping station at Cave Springs, Kan., and she learned the job from him, taking over his task immediately after his death. She took the job unofficially at first and without telling anyone about it, but her work was so efficient that she was soon formally placed in charge of the pumping station. After eight years at Cave Springs, Mrs. Russell bid in the Bryor Creek pumping station in Oklahoma, and two years later was transferred to her present station at Crowder. In addition to her railroad duties, she also does a good job of taking care of two children and an invalid husband.

The Grand Trunk's Eightieth Birthday

On November 10, the eightieth birthday of the Grand Trunk Railway of Canada was celebrated, for it was on that date in 1852 that the company was incorporated. The chief purpose of the project was to form a railway connection between the ports of Quebec and Montreal and those of the great inland lakes, but the original purpose was considerably enlarged to provide for a network of branch lines to reach other important centers in Ontario, as well as an extension to Chicago. In 1860, the Grand Trunk had 872 miles of track, out of a total of 1,880 miles in all of Canada. By 1890, it had absorbed or had assumed control of 17 railroads in Canada and 15 more in the United States. By 1900, the Grand Trunk had a network of lines which extended to practically all of the important points in Quebec and Ontario, forming a substantial foundation for the Canadian National system of which the Grand Trunk is now a part.

Moonlight on the Omaha

Always alert for opportunity to earn an honest dollar, the Chicago, St. Paul, Minneapolis & Omaha, on November 3, operated a moonlight excursion for the Transportation Club of St. Paul. The train left the East St. Paul station at 8:30 p. m. and made a slow run to New Richmond, where it turned back in order to reach East St. Paul again at 12:10 a. m. The make-up of the train was unique. First there was a baggage car, with the head-end equipped for the checking of wraps. Along the side of this car was a 32-ft. counter where food and other refreshments were served. Following the baggage car were two first-class coaches, one cafe-club car and two coaches stripped for dancing. In these cars the floors were covered with linoleum, and the music in each coach was furnished by a piano and two other instruments. Following these two cars were a parlor car, two more coaches and another baggage car with a counter at one end for refreshments and a number of tables at which the excursionists could sit. The party numbered 250, all of whom united in praise of the idea. The Omaha now has three additional requests for the operation of moonlight excursion trains.



Two Cars in the Excursion Train Were Arranged for Dancing

NEWS

Ten Months Railway Net A 1.16 Per Cent Return

Income of $266,295,438 compares with $473,539,394 in first 10 months of 1931

Class I railroads for the first ten months of 1932 had a net railway operating income of $266,295,438, which was at the annual rate of return of 1.16 per cent on their property investment, according to reports compiled by the Bureau of Railway Economics. In the first ten months of 1931 their net railway operating income was $473,539,394 or 2.06 per cent.

Operating revenues for the first ten months totaled $2,662,291,594, compared with $3,642,401,711 for the same period in 1931, or a decrease of 26.9 per cent. Operating expenses amounted to $2,051,513,280, compared with $2,785,591,472 for the same period one year ago or a decrease of 26.4 per cent.

Class I railroads in the ten months paid $244,822,377 in taxes, compared with $271,916,674 for the same period in 1931 or a decrease of 10 per cent. For October alone, the tax bill amounted to $23,608,634, a decrease of $2,725,585 under October the previous year.

Sixty-one Class I railroads failed to earn expenses and taxes in the first ten months of 1932, of which 17 were in the Eastern district, 16 in the Southern and 28 in the Western.

For the month of October the net railway operating income was $63,839,317, which was at the rate of 1.88 per cent. In October, 1931, the net was $64,202,245, or 1.88 per cent.

Operating revenues for October amounted to $298,461,506 compared with $363,185,762 in October, 1931, a decrease of 17.8 per cent. Operating expenses totaled $200,146,789, or a decrease of 23.4 per cent. Compared with September the revenues increased $26,000,000, the expenses $11,000,000, and the net railway operating income $14,000,000.

Class I railroads in the Eastern district for ten months had a net of $179,125,352, at the rate of 1.67 per cent. For the same period in 1931 the net was $246,378,715, or 2.31 per cent. Operating revenues in the Eastern district for ten months totaled $1,360,171,374, a decrease of 25.4 per cent below the corresponding period the year before, while operating expenses totaled $1,010,629,117, a decrease of 27.5 per cent. The net was $33,354,580, compared with $30,853,652 in October, 1931.

Railroads in the Southern district for ten months had a net of $17,144,500, at the rate of 0.61 per cent. For the same period in 1931, the net amounted to $37,672,115, at the rate of 1.34 per cent. Operating revenues in the Southern district for ten months amounted to $317,993,221 a decrease of 28.4 per cent under the same period in 1931, while operating expenses totaled $265,378,825, a decrease of 27.1 per cent. For October the net was $5,570,892 compared with $3,787,860 in October last year.

In the Western district for ten months the net was $70,025,586, at the rate of 0.74 per cent. For the same ten months in 1931, the railroads in that district had a net of $180,488,564, at the rate of 1.99 per cent. Operating revenues for ten months amounted to $984,126,999, a decrease of 28.4 per cent, while operating expenses totaled $775,505,338, a decrease of 24.6 per cent. For October the net in the Western district amounted to $24,913,845. The net of the same roads in October, 1931, amounted to $29,560,733.

CLASS I RAILROADS—UNITED STATES

Month of October

	1932	1931	% Decline
Total operating revenues ...	$298,461,506	$363,185,762	17.8
Total operating expenses ...	200,146,789	261,225,234	23.4
Taxes	23,608,634	26,334,219	10.3
Net railway operating income	63,839,317	64,202,245	0.6
Operating ratio —per cent...	67.06	71.93	...
Rate of return on property investment —per cent...	1.88	1.88	...

Ten Months Ended October 31

	1932	1931	% Decline
Total operating revenues ...	$2,662,291,594	$3,642,401,711	26.9
Total operating expenses ...	2,051,513,280	2,785,591,472	26.4
Taxes	244,822,377	271,916,674	10.0
Net railway operating income	266,295,438	473,539,394	43.8
Operating ratio —per cent...	77.06	76.48	...
Rate of return on property investment —per cent...	1.16	2.06	...

Increase in Coal Rates Suspended

The Interstate Commerce Commission on November 29 suspended freight tariff schedules published by the Pittsburgh & West Virginia proposing to increase rates on bituminous coal from points on its line in Pennsylvania to Cleveland and other destinations in northern Ohio.

Southern Roads Ask Reopening of Class Rate Case

The southern railways have petitioned the Interstate Commerce Commission for a reopening of and further hearing in the Western Trunk Line freight rate case as to the rates prescribed between Western Trunk Line and Southern territories.

Competition of Airplanes Should Not Be Ignored

Security Owners' Association warns railways to take cognizance of growth of aviation

"America led the world in commercial aviation in September, this year, although in 1911 ours was the least 'air-minded' country," said Milton W. Harrison, president of the Security Owners Association, upon completion of a report embracing every phase of the development of this new industry. The report characterized aviation "the most revolutionary agency of transportation yet developed, the possibilities of which are virtually limitless."

The spokesman of the investors whose funds are devoted to railroad development explained that the Association had studied the aviation industry in an effort to determine the potentialities of this comparatively new form of transportation and to evolve a plan of co-ordination of transportation facilities which will be of mutual advantage to the several carrier groups.

The study of airway transportation is the third of a series upon which the Security Owners Association has been engaged for the last two years. The investigation has been directed upon each basic mode of transportation to determine its importance to the industry as a whole and with a view to its being co-ordinated with the other forms of service. Other studies completed have dealt with public highway and the growth of the motor vehicle traffic, as well as with the development of the inland and intercoastal systems of waterways.

Each of these basic transportation services has been developed chiefly with the aid of public funds, through subsidies of various kinds, and as competitors of the railroads. This competition, the investors contend, has been responsible for serious inroads upon railroad revenues in depressing the rate structure and diverting traffic.

The report is believed to be the most comprehensive array of facts and records of aviation compiled thus far. The investors warn the managements of railroads and shipping companies to take cognizance of the growth and stability of aviation, in order that this new science and service may be directed by responsible interests and in order that it may be brought under the influence of experienced transportation experts before it follows the path of automotive transportation and gets beyond the purview of the railroads.

Tracing the development from the first flight of Orville and Wilbur Wright, at Kitty Hawk, N. C., December 17, 1903, Mr.

Harrison refers to aviation as a "war-born industry," in that the World War demonstrated the practicability of the airplane as an instrument of long-range and quick transportation of persons and goods and its tremendous commercial possibilities.

Although the Post Office Department inaugurated air mail service in 1917, it was not until 1925, when the government contracted with private operators to fly the mail, that aviation received its major commercial impetus. Subsidies in compensation, in the supplying of beacons along air routes, research and the facilities of the weather bureau were intended to be provided only temporarily until the growth of passenger travel and other patronage would justify discontinuance of special privileges. As with other models of transportation, however, these subsidies greatly exceeded expectations with the result that since 1918, $136,715,000 have been appropriated for the handling of domestic and foreign mail matter.

"As to profit and loss," the report said, "the Post Office Department expended $17,000,000 more than it received, a substantial subsidy representing about $2.83 per dollar of revenue received on domestic air mail and $8.41 on foreign air mail.

"The element of national defense becomes a motivating factor," the report continued, "and an ultimately self-sustaining air industry will provide a great training institution and potential war factor without cost to the government. Airplane plants become immediately available for war purposes, and if necessary every commercial plane in the country can be assembled at one point within 48 hours.

"In the domestic air service today there are in operation 29,724 miles of air transport routes (more than 10 per cent of the total railway mileage) over 85 per cent of which mail is flown, with 92 per cent of the air mileage handling both passengers and express. The airways are not showing the effects of the current economic depression, as are other public carriers; in fact, for the six months of 1932, 217,588 passengers were carried, an increase of 28 per cent over the same period last year.

"The air lines in 1931 performed service equivalent to 117,740,000 railway passenger miles, with a revenue loss to the railroads equivalent to 2.5 per cent of net income after fixed charges.

"If the present trend is any indication of the future of air travel, the railroads would do well to regard this agency with more respect. Two years ago railroad executives could say there were no profitable unsubsidized airlines. It has been found that over favorable terrain, and with sufficient available traffic it is entirely possible for air transport companies to carry passengers profitably without subsidy. The engineering development of aircraft, hence reduction of operating costs, is enjoying accelerated progress; and while it is probable many air lines always will be dependent upon the mails for profit, the trend towards profitable passenger service is very definite.

"The increased cost of airplane travel is due almost entirely to the heavy expense of operation. Capital investment is small in comparison with railroads."

The report pointed to unreliability of schedules as an important obstacle to air travel. "However, regardless of subsidy," it said, "a passenger line between New York and Washington shows an operating profit and is an example of what can be accomplished by intelligent schedules when traffic conditions are favorable.

"Assuming that Pullman travel averages 5.6 cents a mile, and conceding the present rate of increase in air travel for the next five years, the railroad and Pullman loss of revenue will be about $23,400,000.

"In 1931 the railroads carried 85,225,000 ton-miles of first class mail and received $24,369,946, or 28.6 cents per ton-mile. The airways carried the equivalent of 3,207,549 ton-miles and received $17,593,410, an average of $5.33 per ton-mile, or 16.6 times as much as the cost by rail.

"Air mail and package freight carried by the airways represents nearly 100 per cent diversion from the rails. Eventually the airways may carry a large proportion of first-class mail, though in package transport at present rates their competition will be limited chiefly to distances greater than 500 miles."

Discussing airways facilities, the report said there are more than 2,000 airports and landing fields, of which more than 1,300 are municipal, or privately owned, and in which more than $150,000,000 has been invested. January 1 there were 7,305 licensed aircraft in use. The weight per horsepower is about 1.71 pounds and the cost about $15 per horsepower.

Although the Ford Company has built a 2,500 horsepower plane, the trend is towards smaller ships. Experiments have been made with a ship for commercial use with a cruising speed of 200 miles an hour, carrying ten passengers and with an operating cost of 20 cents a plane-mile.

"Well operated routes with such planes," the report continues, "and with fare equal to or lower than railway rates undoubtedly will make marked inroads upon long-haul railroad and highway traffic. Distances by air are invariably shorter than by rail. For the seven months of this year passengers were carried on 84.9 per cent of the airplane mileage flown.

"There is a growing tendency of airlines to increase the number of employees out of proportion to the increased mileage.

"The flight duty of first flight pilots is about one hour, 37 minutes in domestic service, one hour, 30 minutes in foreign operations. Bringing this service to comparison with railroad employees, pilots were paid in 1931 an average of $430 a month to $301 for locomotive engineers: aircraft mechanics averaged $165 to $142 for rail mechanics. The average service of a pilot was one hour, 18 minutes the day, engineers four hours, 22 minutes. So far there are no general wage agreements between air transport operators and their employees."

The report emphasized the importance of the airplane as an agent of international commerce, both as handlers of mails and of small shipments of goods. It cited particularly the wholesome influence of the airplane in South American commerce. Both France and Germany are competing in South America with the help of their air services, the report pointed out; both countries operating steamship-airship service. Italy, it said, recently made plans to enter the trade with the help of anchored ships across the South Atlantic.

Abandonment of 1,380 Miles of Railroad Authorized

In the first eleven months of this year the Interstate Commerce Commission had authorized the abandonment of 1,380 miles of railway line, as compared with 917 miles in the corresponding period of last year. Abandonments authorized in November amounted to 221 miles.

Railway Express Agency Reduces Air-Express Rates

Nation-wide reductions in its air-express rates were inaugurated on December 1 by the Railway Express Agency, Inc. This downward revision, ranging from 15 to 30 per cent, was made possible by the increased volume of air-express traffic and by the constantly ascending scale of weight averages of shipments.

Reduced Rates on Pipe Found Not Justified

The Interstate Commerce Comission has found not justified a reduction in freight rates on cast-iron pipe from points of origin in Ohio and southwestern Pennsylvania to destinations in Central Freight Association territory, proposed by the railroads serving that territory, which has been suspended since June.

Seatrain Lines Allowed to Participate in Classification

The Interstate Commerce Commission on November 29 suspended supplements to the Consolidated Freight Classification filed by agents for the railroads proposing to cancel the participation of Seatrain Lines, Inc., in the classification in so far as it applies on freight governed by the Southern Classification.

Omaha to Cut Fare in Experiment

The Chicago, St. Paul, Minneapolis & Omaha will establish one-cent-a-mile passenger fares between all stations in the area between the Twin Cities, Minn., Mankato, Fairmont and Elmore, during December and January, as an experiment to create volume travel and encourage people to ride on trains instead of in automobiles. Tickets will be good only in coaches.

Faster Service to Florida

The Florida Special of the Atlantic Coast Line, which will begin its forty-sixth season on January 3, is scheduled through from New York to Jacksonville, 1,022 miles, in 21 hours, equal to 48.7 miles an hour. The condensed timetable through from Boston over the New York, New Haven & Hartford and the Pennsylvania shows Boston to Miami 35¼ hours (1,617 miles, 44.7 m.p.h.); New York to Miami 29¼ hours, or 45 minutes better than a year ago. The combined "Miamian" and the Gulf Coast Limited, leaving New York at 10:15 a.m., will be put in service on December 15, taking the place of the Tamiami. The Havana Spe-

cial, one of the all-year Florida trains of the Atlantic Coast Line, beginning December 14, will have through sleeping cars from Boston to St. Petersburg and Miami; and to Tampa and Sarasota beginning January 4.

The Orange Blossom Special of the Seaboard Air Line is to be put in service on December 15, running from New York to Miami in 31 hours (44.7 m.p.h.). To St. Petersburg the time will be 29½ hours.

Pennsylvania Opens Another Chicago Ticket Office

The Pennsylvania has opened a ticket office at the southeast corner of LaSalle and Monroe streets in the center of the financial district of Chicago. This is in addition to the "Travel Shop" which the company maintains at Michigan avenue and Wacker drive. The Pennsylvania will remain in the Consolidated ticket office on West Jackson boulevard until December 31.

N. J. Railroads Win Step in Tax Suit

Federal Judge William Clark of the New Jersey district has granted an injunction restraining the tax-collecting officers of New Jersey from collecting approximately $6,000,000 levied upon the New Jersey railroads.

The order was granted on condition that the railroads make part payments on the total amount due. Litigants expect that the case will be carried ultimately to the Supreme Court.

Reduced Fruit Rates Authorized

The Interstate Commerce Commission has authorized H. G. Toll as agent for the transcontinental lines and the Union Pacific to publish on five days' notice reduced rates on low-grade apples and pears from the Yakima and Wenatchee valleys in Washington to the Dakotas, western Minnesota, Nebraska, Kansas, and other points, to expire March 31, 1933. It was stated that unless reduced rates were made effective large quantities of the low-grade fruit could not be marketed.

October Locomotive Shipments

October shipments of railroad locomotives from principal manufacturing plants, as reported to the Bureau of the Census, United States Department of Commerce, totaled 12 locomotives as compared with 13 in September, 12 in October, 1931, and 51 in October, 1930. Unfilled orders at the end of October totaled 87 locomotives as compared with 99 at the close of the previous month, 147 at the end of October, 1931, and 157 at the end of October, 1930.

These statistics do not include data on locomotives built by railroads in their own shops.

Fourth Section Relief On Petroleum Products Recommended

Examiners E. J. Hoy and P. R. Peyser of the Interstate Commerce Commission have recommended in a proposed report that the commission grant fourth section relief authorizing the railroad lines operating between New Orleans and Baton Rouge, La., and Mobile, Ala., to reduce rates on gasoline and kerosene, in tank-car loads, from origin points in the New Orleans-Baton Rouge group to Mobile, to meet barge competition, without making corresponding reductions at intermediate points.

Interchange and Loading Rules

The Interchange Rules of the Mechanical Division, as revised for 1932, effective January 1, 1933, have been approved by the Board of Directors of the American Railway Association and will be ready for distribution by December 15.

In order to avoid unnecessary expense, the Loading Rules have not been reprinted. The recommendations contained in the 1932 report of the Committee on Loading Rules and approved at the 1932 annual meeting, and subsequently by letter ballot, have been prepared in the form of a supplement, No. 2, to the current Code of Loading Rules, effective January 1, 1933.

Employees Organize in Oklahoma

Local units of the Railway Employees and Taxpayers Association of Oklahoma have been formed and executive officers elected as follows: Guthrie, H. T. Anderson (agent, A. T. & S. F.), chairman; Haileyville, W. H. Doyle (agent, Rock Island), chairman; McAlester, M. G. Lippert (chief clerk to agent, Rock Island), president; Forgan, J. Gilardi (agent, M-K-T), chairman; Shawnee, J. T. Johnson (agent, Rock Island), chairman; El Reno, J. L. Coss (Oklahoma Railway), chairman; Miami, J. L. Cooper (traffic manager, Northeast Oklahoma R. R.), president.

Ohio Valley Shippers' Board

The Ohio Valley Shippers' Advisory Board will hold its annual meeting at the Netherland-Plaza Hotel, Cincinnati Ohio, on Tuesday, December 13. The chairman is J. G. Young, director of transportation of the Columbus Chamber of Commerce. A program of expanded activities, which has been under consideration for some time past, will be further considered and discussed at this meeting. At a luncheon, arranged by the Cincinnati and the Miami Valley traffic clubs, the members will listen to an address by Colonel C. O. Sherrill of the Kroger Grocery & Baking Company.

I. C. C. Finds Pig Iron Rates From South Not Too Low

The Interstate Commerce Commission has announced a finding that rates on pig-iron, in carloads, from Birmingham, Ala., and related producing points in the South to Gulf ports, south Atlantic ports, and Norfolk ports for coastwise movement beyond have not been shown to be unreasonably low or otherwise unlawful. This was decided on a series of complaints by companies operating blast furnaces in trunk line and New England territories alleging that the rates are unreasonably low, unduly prejudicial to northern producers, and unduly preferential of southern producers. The northern carriers also appeared at the hearings in support of the complaints and asked that the assailed rates be condemned. The commission held that it was without authority to prescribe minimum rates on pig-iron from southern points moving under joint rail and water routes except on traffic moving over the Central of Georgia and the Ocean Steamship Company of Savannah and that prescription of minimum rates via that route was not warranted.

Commissioner E. I. Lewis Re-Appointed

President Hoover on December 7 sent to the Senate the nomination of Ernest I. Lewis for reappointment as a member of the Interstate Commerce Commission for a new term on the expiration of his present term on December 31. Commissioner Lewis was appointed to the commission by President Harding in April, 1921, and was re-appointed by President Coolidge in 1925. Democratic leaders of the Senate have announced their intention not to confirm the President's appointments of Republicans to such positions but to hold vacant such offices as may be filled by Democrats by appointment of President-Elect Roosevelt after March 4.

Transportation Not Included in President's Message

No discussion of the transportation situation was included in President Hoover's message to Congress on December 6. He said he had placed various legislative needs before the Congress in previous messages and that these views "require no amplification on this occasion;" and he recalled the fact that he had previously urged "the need for reform in our transportation and power regulation" and ratification of the Great Lakes-St. Lawrence seaway treaty. These and other special subjects he will, where necessary, deal with by special communications, he said, adding that every detail of the government is covered in reports to Congress by the departments and other agencies.

New Equipment Installed

Class I railroads in the first ten months of 1932 placed in service 2,799 new freight cars, the Car Service Division of the American Railway Association has announced. In the same period last year 11,891 new freight cars were placed in service. The railroads on November 1 had 2,465 new freight cars on order, compared with 4,610 on the same day last year.

The railroads also placed in service for the first ten months this year 37 new locomotives, compared with 114 in the same period in 1931. New locomotives on order on November 1 this year totaled three, compared with nineteen on the same day last year.

Freight cars and locomotives leased or otherwise acquired are not included in the above figures.

Jersey Central Tells Commuters How Much They Pay in Taxes

Each commutation ticket issued by the Central of New Jersey for December, has attached to it a slip showing the proportion of the amount paid for the ticket by the passenger which is returned by the railroad in taxes to the public. Of the $10.37 which a passenger pays for a 60-

trip commutation ticket between Plainfield, N. J., and New York, for example, the railroad returns in taxes $1.70.

An official of the C. N. J. speaking of this notice to passengers said, "At this time when cost of government is being brought home to so many people, the above illustration sets forth a striking example of money which they have assumed was going into private channels, covering the cost of service and conduct of business generally, being diverted to public use."

Club Meetings

The Western Railway Club will hold its next meeting at the Hotel Sherman, Chicago, at 7 p. m., Monday, December 12. This will be ladies' night and the club will listen to a paper on the Chicago World's Fair, by Rufus C. Dawes, president of the Century of Progress organization.

The New England Railroad Club will hold its next meeting at Hotel Statler, Boston, on Tuesday evening, December 13. C. E. Smith, vice-president of the New York, New Haven & Hartford, will address the club on "Some Phases of the Present Railroad Situation."

The Railway Club of Pittsburgh (Pa.) will hold its next meeting at the Fort Pitt Hotel, Pittsburgh, on Thursday evening, December 22. Dr. Phillips Thomas of the Westinghouse Electric & Manufacturing Company will speak on "electrons at work and at play."

Tax Injunction Upheld

The temporary injunction granted the Northern Pacific preventing 23 counties of the state of Washington from collecting taxes levied upon the railway's personal property for 1927, 1928 and 1929 was upheld by the United States Circuit Court of Appeals at San Francisco, Cal., on November 8. Originally, the Northern Pacific was granted the injunction in the district court at Seattle after it had charged that the assessment of each county was so excessive as compared with the assessment of all other property in the counties levying the taxes that the assessment was actually or constructively fraudulent and void. The railroad paid that part of the taxes it admitted were justly due (upon valuation commensurate with that levied on other property in the county). Other railroads in the state have taken similar action.

Results of Mechanical Division 1932 Letter Ballot

At the session of the American Railway Association, Mechanical Division, held in Chicago, June 23 and 24, the recommendations from various committees were ordered submitted to a letter ballot of the members. These recommendations, totaling 45 in number, to amend the standard and recommended practice of the division, were approved, effective March 1, 1933, except proposition No. 5 covering recommended practice for the standardization of 300-lb. globe and angle valves for steam locomotives, the effective dates for which will be recommended by the Committee on Locomotive Construction in its report to the 1933 annual meeting. Also, the recommendations to amend the loading rules of the division were approved, effective January 1, 1933. Mechanical Division circular No. D.V.-792, just issued, covers the detailed results of the letter ballot.

Letters for Classifying Mechanical Refrigerator Cars

As a result of favorable action on a letter ballot recently submitted to the members of the American Railway Association, Mechanical Division, the following new definitions and designating letters covering mechanical refrigerator cars have been adopted as recommended practice:

"RP" — Mechanical Refrigerator. — A house car equipped with insulation, with or without means of ventilation and provided with some apparatus or other device for furnishing protection against heat and/or cold. Apparatus operated by power generated inside the car (not through the car axle).

"RPA" — Mechanical Refrigerator. — A house car equipped with insulation, with or without means of ventilation and provided with apparatus or other device for furnishing protection against heat and/or cold. Apparatus operated by power derived through the car axle.

B. & M. Cuts Dining Car Prices

Sharp reductions in the prices of all articles of food served in its dining cars were put into effect by the Boston & Maine on December 8. These cuts, which in some cases amount to as much as 50 per cent, have been made "as a further effort to make passenger service attractive to the public under present-day conditions and to attract the coach passenger into the dining car." "Quality and quantity of food," the announcement continues, "will be exactly the same. We have been able to effect economies in dining car service without impairing it, and we are passing the savings along to our patrons."

As examples of the new prices, steak has been reduced from $1.25 to 75 cents, and apple pie from 25 to 15 cents; while combination meals, instead of being as high as $1.75, as in the past, are priced from 65 cents for a full-course dinner (choice of soup or appetizer, roast with vegetables, choice of dessert, bread and butter and beverage) up to a top price of $1.25 for a more elaborate meal.

The Cotton Belt's Traffic Manual

The St. Louis Southwestern has issued the Southwestern Traffic Manual, one of the most elaborate undertakings of the kind. It includes more than 500 pages of tables, charts, abstracts, etc., compressed into a thin volume of ready reference. There are more than 45,000 mileage computations of distances via short-line workable freight routes between 117 principal cities on the one hand, and 377 destinations on the other.

The manual contains comprehensive rates and service charts, tables of carload rates on Southwestern classes and commodities related to first class, service on perishable products from the principal producing valleys to 19 primary markets, rates on lumber and cotton between producing and consuming centers, and an abstract of the Western classification.

This manual, prepared by John R. Turney, vice-president in charge of traffic, and A. C. McKibbin, director of public relations, places in the hands of traffic men and shippers a compendium of information gathered from a great variety of original sources.

Chicago Association Proposes Rail Law Changes

Recommendations to the effect that the regulation of railroads should be reduced to a point where it will be confined to assurance of fair rates and of public safety and will avoid interference with the functions belonging to the management, have been sent to the Chamber of Commerce of the United States by the Chicago Association of Commerce. The proposals include the following recommendations:

The existing recapture clause should be retroactively repealed;

The elaborate process of valuation should cease upon completion of the original valuation of a railroad, with the commission thereafter merely keeping itself informed as to changes in plant;

Financial stability of railroads requires replacement of Section 15a of the Interstate Commerce Act, with a provision directing the commission, in fixing just and reasonable rates, to consider the effects upon traffic movement, upon efficient service at lowest consistent cost, and upon a reasonable average return that will permit, in time of general business activity, reasonable reductions of indebtedness and accumulation of adequate reserves;

Water transportation, as well as highway transportation, should be opened to railroads on an equal basis with water and highway carriers;

Railroads should be allowed to establish new rates in order to meet competition from other forms of transportation.

River and Harbor Expenditures

The annual report of the Secretary of War, Patrick J. Hurley, says that the number of river and harbor improvement projects now in force in the United States, Puerto Rico, Alaska and the Hawaiian Islands is 954, exclusive of flood control projects. The amount expended on the maintenance and improvement of river and harbor works for the year ended June 30 was $75,596,331. Active operations were in progress during the year on 361 projects.

The amount required for the completion of authorized projects, within the limits of the authorized appropriations, is $178,500,000; and on flood control, $166,960,100; a total of $345,460,100. These amounts take into account the appropriations provided by the War Department act approved July 14, 1932, and the emergency relief and construction act approved July 21, 1932.

Water-borne commerce for the calendar year 1931 amounted in the aggregate to 445,648,000 tons, a decrease of 74,632,000 tons under that of 1930. The reported value of this commerce was $14,935,000,000, a decrease of $5,187,000,000 under that of 1930.

Reduced Passenger Fares to World's Fair

Following the action of railroads in the Western Passenger Association in reducing fares for Chicago's 1933 World's Fair, the central Passenger Association railroads on November 22 announced substantial reductions, to be effective from June 1 to November 1, 1933. The fares offered are similar to those offered by the Western Passenger Association, as described in the *Railway Age* of November 26. The Cen-

tral Passenger Association, (which covers the territory eastward to Buffalo, N. Y., Pittsburgh, Pa., Wheeling, W. Va., and Parkersburg, and south to the Ohio river) and the Trunk Line Association will offer 30-day limit fares, honored in all classes of cars, to be sold on Tuesdays and Saturdays of each week, at one and one-half the regular one-way fare for the round trip; 16-day limit fares for sale on Tuesdays and Saturdays of each week honored in all classes of cars at one and one-third the regular one-way fare for the round trip; and 15-day limit fares for sale on Tuesdays and Saturdays of each week, good only in coaches, at one and one-tenth the regular one-way fare for the round trip.

Northern New England Roads Cut Store-Door Delivery Rates

Railroads of northern New England, effective January 1, will abolish the charges in addition to the regular station-to-station rates which have been assessed on long-haul l.c.l. freight moving under the store-door pick-up and delivery tariffs which became effective several months ago. Also, the minimum charge restrictions of 75 cents, and in some cases $1 applied to pick-up and delivery shipments will be removed.

Announcement of the foregoing was made by the Boston & Maine which stated in addition that it has "found pick-up and store-door delivery of l.c.l. freight a success" and "a means of bringing back to the rails some of the traffic which heretofore has been moving over the public highway."

The railroads participating in the new rates include, in addition to the Boston & Maine: The Maine Central, Central Vermont, Rutland, Grand Trunk, Canadian Pacific, Montpelier & Wells River, St. Johnsbury & Lake Champlain, and the Bangor & Aroostook, on l.c.l freight moving to and from places located within New England.

Loans By Railroad Credit Corporation

Loans either actually made and outstanding or authorized by the Railroad Credit Corporation to railroads to meet their fixed interest obligations totaled $38,004,082 on December 1, according to the monthly report of that corporation filed with the Interstate Commerce Commission. The amount derived from the rate increases under Ex Parte 103 in September amounted to $5,372,627 and for the nine months totaled $46,219,630.

In a letter addressed to the chief executives of participating carriers and accompanying the report, E. G. Buckland, president of the corporation said: "Loans in the sum of $2,725,400 were authorized in November, making the total authorizations to date $39,091,369. Of this amount $37,203,681 is outstanding and $800,400 is represented by commitments. Loan repayments during the month totaled $22,037, bringing the total repayments to $1,087,287, which, having served to prevent a default in fixed interest obligations, has again been made available for the purposes of the plan. Emergency revenue reported to November 30, being the amounts accruing to participating carriers to September 30, aggregated $46,219,630, and is slightly in excess of the $5,000,000 per month estimated in the early part of the year."

War Department Has Tentative Transportation Plan

A tentative plan for the utilization of transportation in time of war has been prepared in the War Department but it has not been considered wise to adopt a definite plan, according to the annual report of F. H. Payne, Assistant Secretary of War.

"Since in this country plans involving industrial mobilization must be fitted to conditions obtaining at the outbreak of war, and since the transportation systems of the nation are now passing through a period of transition involving major changes in organization and operation," he said, "I feel that it would be extremely unwise to approve and promulgate at this time any definite plan for the utilization of transportation in time of war. Rather, I have directed that a tentative plan be drawn up and subjected to constant scrutiny with a view to keeping it always in harmony with conditions in the field of transportation. This has been done, and the tentative plan so prepared is based on the provisions of the industrial mobilization plan and on the recommendations of the War Policies Commission. Contact with the transportation industry has been maintained through the American Railway Association, the Society of Automotive Engineers, the Chamber of Commerce of the United States, Regional Shippers' Advisory Boards, and the Inland Waterways Corporation."

New York Railroad Club Dinner

The sixtieth annual dinner of the New York Railroad Club will be held at the Hotel Commodore, New York, on Thursday evening, December 15. The president of the club, George LeBoutillier, vice-president of the Pennsylvania Railroad, will be assisted by H. H. Vreeland, who will function in the capacity of master of ceremonies. In addition to music by an orchestra, the New Haven Railroad Glee Club from New Haven, Conn., will render a number of selections. The conventional type of speaking program will be done away with and a special entertainment will be provided, featuring five three-round boxing bouts under the auspices of the A. A. U. Gene Tunney will act as referee and Joe Humphries as announcer.

The chairman of the committee in charge of the dinner is C. E. Smith, vice-president, New York, New Haven & Hartford. The vice-chairman of the general committee is T. P. O'Brian, sales manager, O. M. Edwards Company. The general committee will be assisted by a number of sub-committees, including an advisory committee, with J. S. Doyle, assistant general manager of the Interborough Rapid Transit Company, as chairman; reception committee, Frank Hedley, president and general manager for receivers, Interborough Rapid Transit Company, chairman; dinner and entertainment committee, Arthur N. Dugan, vice-president, National Bearing Metals Company, chairman; publicity committee, F. T. Dickerson, secretary and treasurer, Central Railroad of New Jersey, chairman; attendance committee, William Wampler, president and general manager, The Ellcon Company, chairman. The chairman of the seating committee is H. M. Norris, Interborough Rapid Transit Company, 165 Broadway, New York.

$7,137,560 Proposed for Work of I.C.C.

An appropriation of $7,137,560 for the work of the Interstate Commerce Commission for the fiscal year ending June 30, 1934, is proposed in the budget estimates submitted to Congress this week by President Hoover. This compares with $7,148,560 appropriated for the fiscal year 1933, which was a reduction of approximately $2,000,000 as compared with the amount for 1932. The explanation in the message says that this includes both increases and decreases, including a "drastic reduction" of $482,158 in the item for railroad valuation work; a large part of this amount, however, was added to the item for the commission's Bureau of Accounts, which suffered a drastic reduction in the last appropriation bill.

The President earnestly recommended to the Congress that there be no further grant of legislative authority for appropriation for federal-aid highways "until the financial condition of the Treasury justifies such action." The budget for 1934 contains an estimate of appropriation of $40,000,000 of the unappropriated balance of the authorizations heretofore made of $51,560,000.

A reduction of $20,161,871, as compared with the appropriation for the current year, for river and harbor work is also recommended because of an emergency appropriation of $30,000,000 made last July. An estimate of $39,388,129 for the annual appropriation for the maintenance and improvement of existing river and harbor works is included in the budget message, and the cash availability for the two years totals approximately $149,445,000, or an average of $74,722,000 per year.

Interchange of Cars Equipped With Experimental Brake

Based on the results of the American Railway Association power-brake investigation, the Westinghouse Air Brake Company and the New York Air Brake Company have submitted a new Type-AB freight brake equipment, which promises important improvements over the present standard brake in application and release functions. It is also designed to reduce ordinary maintenance costs and provide for such modification as to restore its characteristics to that of the present brake, if found necessary. To determine the merits of the new brake for general service and ascertain to what degree it will prove effective in reducing maintenance costs, arrangements have been made for the application of the Type-AB brake to a considerable number of cars.

To facilitate interchange of cars equipped with the new brake, the American Railway Association, Mechanical Division, has recently authorized the addition of a new

note under Par. 3, Sec. A of Interchange Rule 3, as follows: "Note: Cars equipped with the new experimental design of air-brake equipment, designated as 'AB' and stenciled 'AB brake experimental,' will be accepted in interchange on or after November 15, 1932." The General Committee, in Circular No. D.V.-793, requests that appropriate instructions be issued on each road to permit the free interchange of cars equipped with the experimental "AB" air brake.

Canadian Roads in October

Reduced gross revenues, expenses and net are reported by the Canadian Pacific for October. Gross for the month was $12,279,731, against $13,764,049 a year ago, a decline of $1,484,318. Expenses were reduced by $931,229 from a year ago, totaling $8,356,157 in October. Net accordingly was $3,923,573, a reduction of $553,089 from the $4,476,662 reported a year ago.

For the ten months of the company's fiscal year ended with October, gross earnings at $103,504,681 show a reduction of $18,847,003, while this has been almost counterbalanced by a cut of $16,033,118 in operating expenses, leaving net at $14,454,943 against $17,268,829, down $2,813,885.

An increase of $1,083,724 or 58.84 per cent in net operating revenue for the month of October, 1932, as compared with October, 1931, is shown in the monthly report of the Canadian National. While gross for the month showed a decrease of $1,831,870, or 11.44 per cent, operating expenses were reduced by $2,915,594 or 20.75 per cent as compared with October of last year.

For the ten months ending October 31, net revenue of the Canadian National shows an increase of $3,718,071 or 68.76 per cent as compared with ten months' period ending October, 1931.

Gross revenues for the ten months' period decreased by $27,157,704 or 18.28 per cent from the gross for the same period of last year, but this was more than offset by a reduction in operating expenses in the 1932 period of $30,875,775 or 21.57 per cent.

Truck Traffic Estimated At 5.5 Per Cent of Rail Ton-Mileage

An estimate that intercity for-hire trucks and trailers in 1931 transported 245,775,000 tons of freight, making a total ton-mileage of 17,400,000,000 or 5.5 per cent of the railway revenue ton-mileage for that year, is included in the annual report of the Secretary of Commerce. The tonnage represents 15.3 per cent of the revenue tons carried by Class I railways for the year and 27.5 per cent of the originating tonnage, although, because of the shorter average haul, it represents a much smaller percentage of the ton-mileage. According to this estimate, 200,000 of the 3,466,303 motor trucks registered were taken to be in intercity common and contract carrier service.

The estimates were given in a single paragraph, with no explanation as to methods, and were said to have been recently made by the Bureau of Foreign and Domestic Commerce. They are understood to have been based in part on the survey made jointly by the division of transportation and communication of that bureau and the Bureau of Public Roads, covering the operations of about 3,000 trucks, which was abstracted in the *Railway Age* of September 10, page 363. The bureau is now compiling a study made during the year of the commodity movement by rail.

In the Interstate Commerce Commission's report of April 6 on Co-Ordination of Motor Transportation it was estimated that the trucking industry in 1929 carried nearly 26,000,000,000 ton-miles, or approximately 6 per cent as much freight, measured in ton-miles, as the railroads and 4 per cent as much as all agencies of inland transportation; in terms of tonnage, and disregarding the distance transported, it was estimated that the trucks originated for intercity movement 14.2 per cent as much traffic as did the railroads in 1929. These figures were not limited to for-hire trucking, but did exclude local trucking.

Railway Fixed Charges Earned in September

Class I railways of the United States in September earned their interest and other fixed charges and had a net income (amounting to $6,384,811 for the month) for the first time this year, according to the Interstate Commerce Commission's monthly compilation of selected income and balance-sheet items. This reduces the cumulative net deficit after charges to $167,851,206 for the nine months period as compared with a net income of $85,590,593 for the corresponding period of last year. The September net compares with a net of $16,819,318 in September last year. The commission's summary is given in the accompanying table.

Canada to Tackle Truck Problem

At a conference called by Premier R. B. Bennett of Canada to meet in Ottawa on January 17 representatives of the Dominion and the provincial governments will seek an agreement as to their respective jurisdictions over the operation of trucks and buses and in competition with the steam railways. Other questions of jurisdiction will also be dealt with, but this is held to be the most important and it is contended, further, that the legislation now before the Canadian Parliament and based on the report of the Royal Transport Commission providing for compulsory co-operation between the Canadian Pacific and Canadian National for the promotion of economy is of small importance compared with a solution of the problem of unfair highway competition. The former is held to be more of a negative measure while the latter a positive step in

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I RAILWAYS; NINE MONTHS

Compiled from 160 reports representing 165 steam railways, including 17 switching and terminal companies

TOTALS FOR THE UNITED STATES (ALL REGIONS)†

For the month of September			For the nine months of	
1932	1931	Income Items	1932	1931
$49,828,480	$55,564,167	1. Net railway operating income	$203,835,007	$410,858,271
14,512,277	17,765,769	2. Other income	147,530,136	189,497,578
64,340,757	73,329,936	3. Total income	351,365,143	600,355,849
11,192,687	11,137,463	4. Rent for leased roads	99,169,612	99,486,627
44,820,680	43,646,444	5. Interest deductions	400,911,698	396,775,735
1,942,579	1,726,711	6. Other deductions	19,135,039	18,502,894
57,955,946	56,510,618	7. Total deductions	519,216,349	514,765,256
6,384,811	16,819,318	8. Net income	*d167,851,206*	85,590,593
		9. Dividend declarations (from income and surplus):		
1,320,017	20,460,195	9-01. On common stock	54,540,655	212,795,886
114,981	3,526,412	9-02. On preferred stock	13,292,910	41,621,138

BALANCE-SHEET ITEMS

Selected Asset Items

	Balance at end of September	
	1932	1931
10. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$776,809,871	$821,495,640
11. Cash	302,781,908	382,662,827
12. Demand loans and deposits	37,494,677	48,861,587
13. Time drafts and deposits	32,869,608	64,731,680
14. Special deposits	37,839,722	47,587,639
15. Loans and bills receivable	13,265,286	8,168,349
16. Traffic and car-service balances receivable	46,784,766	63,238,925
17. Net balance receivable from agents and conductors	41,021,262	51,726,003
18. Miscellaneous accounts receivable	149,256,405	171,099,556
19. Materials and supplies	331,600,716	390,637,657
20. Interest and dividends receivable	38,041,520	40,472,207
21. Rents receivable	3,204,482	5,497,831
22. Other current assets	8,404,876	13,449,191
23. Total current assets (Items 11 to 22)	1,042,565,228	1,288,133,452
Selected Liability Items		
24. Funded debt maturing within six months*	162,494,637	74,508,672
25. Loans and bills payable	276,547,711	200,089,626
26. Traffic and car-service balances payable	63,602,121	89,820,913
27. Audited accounts and wages payable	201,129,295	274,866,813
28. Miscellaneous accounts payable	82,108,389	75,213,515
29. Interest matured unpaid	174,523,312	157,415,693
30. Dividends matured unpaid	15,120,352	26,792,070
31. Funded debt matured unpaid	51,309,644	42,963,945
32. Unmatured dividends declared	878,669	20,854,485
33. Unmatured interest accrued	108,099,375	108,334,337
34. Unmatured rents accrued	28,335,232	28,714,762
35. Other current liabilities	19,719,100	23,592,655
36. Total current liabilities (Items 25 to 35)	1,021,373,200	1,048,658,814

† Complete data for the following Class I railways not available for inclusion in these totals: Canadian National Lines in New England, Canadian Pacific Lines in Maine, and Canadian Pacific Lines in Vermont.

* Includes payments which will become due on account of principal of long-term debt (other than that in Account 764, Funded debt matured unpaid) within six months after close of month of report.

d Deficit.

the direction of rescuing the Canadian roads.

It is significant that thus far the most urgent representations in connection with highway competition have come from the railway labor unions, a large delegation of which last week interviewed in Toronto Premier George S. Henry of Ontario. The delegates asked the premier that legislation be passed to place all trucks and buses operating within the province under the control, administration and supervision of a transport commission.

The union men alleged the railways were subject to unfair competition from motor vehicles and urged that the proposed transport commission fix rates and tariff changes and place bus and truck operation under conditions similar to those imposed upon railways.

The deputation urged a tax on commercial vehicles commensurate with the use they make of highways; that owners guarantee financial responsibility for damage claims, and that permission for operation on the highways for revenue purposes be forbidden where adequate transportation facilities already exist, or where the steam railways can and are willing to provide these facilities.

Unions represented in the delegation were the Brotherhood of Locomotive Engineers, the Order of Railway Conductors, the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Firemen and Enginemen.

Canada Discusses Legislation

While those opposed to any form of public ownership, including President E. W. Beatty, of the Canadian Pacific, have come out in the open against the measure, it has become evident that the Canadian government is determined to put through in its present form the bill based on the findings of the Royal Commission on Transportation. Parliament has adjourned until January 30, when work on the railway bill, which so far has been in the Senate Committee on Railways and Telegraphs, will be resumed. All that has been accomplished on it up to adjournment was to redraft the bill and hear representations from the railways and some public bodies, including the railway labor organizations.

President Beatty's chief objection to the legislation is in the third part, namely, the arbitral tribunal, which he regards as a form of compulsory arbitration or compulsory co-operation. G. G. Ruel, former vice-president of the Canadian National, who also gave evidence before the Royal Commission, appeared before the committee and declared that, while he had been loyal to the road for which he had worked for many years, he was in principle opposed to public ownership, and he submitted to the committee a plan calling for joint management of the two roads by a board consisting of five officials from each and for a period of at least five years, although he did not think the fruits of that arrangement could be made apparent in much less than ten years.

Railway labor organizations have appeared before the committee, all of them represented by W. L. Best, Dominion legislative representative of the Brotherhood of Locomotive Firemen and Enginemen; R. J. Tallon, president of the Federation of Railway Trades in Canada, and by A. R. Mosher on behalf of the national railway unions of Canada. Labor, generally, favored economies on the railways to enable the roads to get back to financial normalcy, but they wanted those economies to stop short of involving the laying off of many more men, asserting that such a move would be false economy in that it would only tend to swell the bread lines.

To show how seriously the railway situation is regarded by the Senate, a motion was made at the last meeting of the committee by Senator James Calder (Saskatchewan), the effect of which would be parliamentary direction to the two roads to get busy and intensify their economy efforts during the next four or five months, pending the passage of the proposed legislation. That motion, however, was allowed to stand, but later the same day in the Senate a similar motion was made by Senator J. P. B. Casgrain (Montreal).

Validity of Recapture Clause Again Attacked

Injunction proceedings attacking the validity of the recapture clause of the Transportation Act of 1920, under which the government claims one half of all railway earnings in excess of six per cent, were begun in the United States district court at Danville, Ill., on November 25, when a suit, filed by the Illinois Terminal Railroad, operating steam and electric lines in Illinois as a subsidiary of the Illinois Power & Light Corporation, was opened before Federal Judge Walter C. Lindley. In its complaint, the Illinois Terminal Company asked the court to set aside an order of the Interstate Commerce Commission issued on September 6, 1932, requiring the railroad to pay the government $675,450 for excess profits from March 1, 1920, to December 31, 1924. The petitioners charged that payment of the government bill would be tantamount to confiscation of their property without due compensation, and submitted in proof the earning statements of the years since 1929, showing losses. These years in the "red," the railway counsel pointed out, are not considered by the commerce body when assessing the excess earnings of profitable years. It is charged also that the Interstate Commerce Commission, in the hearings on the case improperly assumed the role of plaintiff, prosecuting attorney, prosecuting witness, judge and jury, and that it erred in determining the railroad's property valuation. Values fixed by the commission in the recapture order for each of the recapture years, except 1921, were alleged to be less than the cost of reproduction, less depreciation, and exclusive of the value of its land and working capital, as determined by the commission.

The petition set forth that the railroad had $1,800,000 in securities posted with the Interstate Commerce Commission as a guarantee, filed in 1928, when the terminal company acquired by lease the Illinois Traction System and other transportation units in the state. The $675,450 so-called excess earnings that are now specifically attacked, covered earnings of the original freight line from Alton, Ill., through Edwardsville to near Belleville, all the right-of-way being in Madison and St. Clair counties, Illinois. Counsel for the Terminal railroad asserted the system failed by at least $159,580 to earn a return of six per cent per annum from March 1, 1920, to December 31, 1930, the period being considered as a whole, and the return being based on income and valuation as determined by the Interstate Commerce Commission. Liability for recapturable excess income, the bill set forth, is fixed upon consideration of each calendar year as a separate period and there is no allowance for offsetting deficiencies of unprofitable years against the surplus of the fat years.

The filing of the suit by the Illinois Terminal follows the St. Louis-O'Fallon litigation of 1929, in which the supreme court ruled that the Interstate Commerce Commission erred, when determining property values, in basing earnings and computations on prices prevailing from 1910 to 1914. At that time, the recapture order went back to the commission for revision of property value figures.

On November 28, the Interstate Commerce Commission notified the Illinois Terminal of an extension to January 30, 1933, of the deadline for payment of the $675,450 alleged due the government. According to the commission, such an extension obviates the necessity for a temporary restraining order; but the railroad and the Interstate Commerce Commission can proceed to litigation over the permanent injunction asked by the Illinois Terminal Railroad.

Mississippi Valley Association Stalling

Charging the advocates of unrestricted transportation on highways and inland waterways with misrepresenting the facts and predicting that chaotic business conditions must continue until the entire transportation system is stabilized, E. H. McReynolds, assistant to the president of the Missouri Pacific, challenged the good faith of the Mississippi Valley Association in an address before the Traffic Club of St. Louis on November 28. Mr. McReynolds accused the association of stalling for time and endeavoring to postpone as long as possible the time when inland water transportation will be subjected to regulation. He also called upon the organization to make public the names of all its members, together with the amounts contributed by each and a list of all its paid employees, their salaries and duties.

"Removing all restrictions from the railroads and permitting the competing forms of transportation to fight it out is not the proper solution," Mr. McReynolds continued. "This would complete the wreck, and ruin the country, destroying an amount of capital impossible to estimate or visualize. While we have no quarrel with the automobile and we appreciate its contribution to the development of the country and to our economic progress, we have got to face the fact that the automobile has already destroyed in the last eight years more than $30,000,000,000 of capital. That is more than the total value of the entire railroad plants in the United States. That is more than half the total value of the entire agricultural industry of America. It is more than double the cost of our

entire highway system and that figure is conservative. This is the difference between $37,500,000,000 the American public paid for the 26,500,000 automobiles on our highways today and their present value, which I have liberally estimated at $7,000,000,000. That money is gone and it isn't coming back.

"If only one-half of it had been spent in that eight-year period for the construction of homes and the furnishing of those homes for food and clothing, pianos, radios and other things that go to make up our standard of living, I do not believe we should have been in our present depression; but, in any event, I submit that America cannot stand any additional destruction of capital at this time.

"When the situation is stabilized, you can depend on the railroads to adjust their services and their rates to meet the situation and when you have accomplished that, you can depend upon them also to carry their fair share of the burden of leading the way back to prosperity. The railroads are still the greatest consumers of basic raw materials in the country. In normal times, they take more than 20 per cent of the coal, iron, steel, oil and lumber, and something over $400,000,000 of miscellaneous manufactured supplies of various kinds. Railroad employees are the best paid in America and in normal prosperous times, they constitute the backbone of purchasing power in the country. They are the ultimate consumer."

Railways Say Barge Line Follows "Law of the Jungle"

The American Barge Line Company was described as "the most notorious rate cutter on the Mississippi and Ohio rivers" in a statement by counsel for several railroads filed with the Interstate Commerce Commission in reply to the barge line company's application to the commission for the establishment of rail-barge-rail rates on cotton from points in Arkansas to points in eastern states and through barge-rail rates from Memphis to the same destinations on the basis of differentials under the all-rail rates recently established by the rail carriers. These rail rates were made to meet "the competition engendered by the unfair and unjust practices" of the barge line company. The reply was signed by W. N. McGehee, W. A. Northcutt, M. G. Roberts and E. A. Smith on behalf of the Illinois Central, the Yazoo & Mississippi Valley, the Southern, the Louisville & Nashville, the St. Louis-San Francisco, the Gulf, Mobile & Northern, the Columbus & Greenville and the Mississippi Central. Referring to the American Barge Line Company they said in part:

It is one of the water carriers that have been demoralizing the rate situation on the Ohio and Mississippi rivers on coffee, sugar, cotton, and other commodities. It has formally voiced its opposition to the regulation of its port-to-port rates. It insists it must be in a position to change its port-to-port rates from week to week, from day to day, from hour to hour, and from minute to minute as conditions, in its judgment, require. It makes what one of its own officers describes as "confidential rates." It refuses to state what those rates are. It is in these days engaging in the very practices that gave rise to the interstate commerce act, and it asks the commission to protect and aid it in these practices. It asks the commission to require the rail carriers to continue the all-rail rates on such a level as will drive the traffic from the rail routes to the water route of the American Barge Line Company. It insists that it must have differentials on its port-to-port traffic that greatly exceed the standard differential of 20 per cent. The greater the differential, the greater the opportunity the American Barge Line Company possesses of continuing its reprehensible practice of making what it terms as "confidential rates," rates which vary from day to day as between shipper and shipper, dependent upon nothing except the mere whim and caprice of the American Barge Line Company. What the American Barge Line Company seeks, in substance, is the destruction and ruin of the rail carriers. There can not be any doubt about its purpose as exemplified in the practices that it is now pursuing and the principles that it so flagrantly advocates. . . .

It is amazing that in this era and after some fifty years of regulation of railroad rates by the Interstate Commerce Commission, the American Barge Line Company should appear before the commission, the tribunal which owes its very existence to the fact that prior to the time the interstate commerce act was passed the rail carriers in this country were in a position to do precisely what the American Barge Line Company is now in a position to do: to change its rates over-night, to make rates for one shipper lower or higher than those that are made for another shipper on the same commodity moving from and to the same points, to change its rates from time to time dependent upon conditions as they arise, and to make its rates dependent upon the quantity offered, and should virtually ask the commission to protect the American Barge Line Company in a continuance of the very practices that gave rise to the enactment of the interstate commerce act. . . .

We recognize, of course, that the commission lacks the power to regulate these common carriers on water as it regulates common carriers by rail, but the commission has the power to determine to what extent through routes and joint rates between the rail and these water carriers will be reasonable, and to fix reasonable minimum differentials.

The American Barge Line Company is in a position to follow and does follow what has recently been described by the California Railroad Commission as the "law of the jungle." The rail carriers are not permitted to follow that law. Their acts and their practices must conform to the standards laid down in the interstate commerce act. But we do not believe that the interstate commerce act leaves the rail carriers entirely helpless before the onslaughts of these unregulated lines. We do not believe that the interstate commerce act is an effective weapon only in the hands of these unregulated lines or that it should be construed as these barge lines contend it should be construed so as to bring about the destruction of the very subject of regulation. We believe that the interstate commerce act still affords some measure of protection to the all-rail carriers in the situations that have recently developed, including the present one, which all have their origin in the practices that are now being pursued by these unregulated agencies of transportation.

Mississippi Valley Association Resents Railroad Interference

Resolutions attacking the criticism by railroad executives of the program for inland waterway development and setting forth its policy with regard to rates and to waterway and motor vehicle transportation were adopted by the Mississippi Valley Association at its fourteenth annual convention in St. Louis, Mo., on November 21-22. The association gave its approval to the St. Lawrence seaway, to the preservation of the American merchant marine, to private operation of transportation facilities, to continued improvement of the inland waterway system, to development of water transportation and to new waterway projects. The resolutions referring to the railroads, competitive transportation and rates reads as follows:

We oppose and will resist every attempt of transportation of any character to exploit commerce or to bend commerce to its will.

The Mississippi Valley Association is unalterably opposed to and sharply resentful of interference by certain railroad executives with the progress of inland waterway development.

The people of the Mid-Continental region are entitled to and the Mississippi Valley Association demands the unrestricted and the fullest use of the most efficient and economical system of transportation that can be developed, and to that end insists that the waterways and highways be not handicapped by artificial restrictions in order to aid any other means of transportation;

That such restrictions as were deliberately imposed on the railroads as an offset to monopoly when the railroads alone supplied transportation, be removed, now that supplemental means of transportation are being developed;

That no railroad be permitted to set up a rate structure for the purpose of destroying a competing means of transportation.

Federal investment in river and harbor improvements are reproductive and increase the taxable wealth of the country.

The special resolution pertaining to railroad rates, which were called destructive, was as follows:

We note with concern and hostility the recent attitude of the Interstate Commerce Commission towards the disposition of railroad arrangements to abandon precedent and precaution and indulge in a frenzy of rate-cutting on a limited number of commodities and in limited areas, apparently to gain, at heavy cost to themselves and to the public, such business as other forms of transportation have been carrying with evident satisfaction to shippers, with the ill-disguised purpose of destroying other forms of transportation.

Resolutions were adopted favoring the development of the Mississippi river from St. Paul, Minn., to the Gulf; the Ohio and its tributaries, including the Great Kanawha, the Tennessee and the Cumberland; the Missouri to Sioux City and as far northwest as may be practicable; the Inter-Coastal canal from Corpus Christi through New Orleans into the Alabama, Coosa and Warrior rivers, and also the Arkansas and Red rivers. The resolutions reiterated the association's stand on the nine-foot channel as a standard with modern locks, dams and other facilities.

New projects approved by resolution were: The Lake Erie and Ohio River canal by way of the Beaver and Mahoning rivers; a nine-foot channel for the Hennepin canal; a nine-foot channel for the Warrior and the Chattahochee rivers; development of the Intra-Coastal canal from the Apalachicola river and extension of the canal to form a Gulf-Atlantic waterway; the Saline river project in the Illinois coal fields, and the projects on the Columbus river and its tributaries in the northwest.

Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—T. L. Burton, Room 5605, Grand Central Terminal Building, New York City.

ALLIED RAILWAY SUPPLY ASSOCIATION.—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foremen's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J. 143 Liberty St., New York.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Room 800, 1017 Olive St., St. Louis, Mo. Annual meeting, June 13-15, 1933, Cleveland, Ohio.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 West Harrison St., Chicago. Next meeting, Jan. 21, 1933.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. R. R., 836 Federal St., Chicago.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—(See American Transit Association.).

AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y.

Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York.

Freight Station Section.—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York.

Protective Section.—J. C. Caviston, 30 Vesey St., New York.

Safety Section.—J. C. Caviston, 30 Vesey St., New York.

Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York. Annual meeting, June 13-15, 1933, Hotel Stevens, Chicago, Ill.

Division II.—Transportation.—G. W. Covert, 59 East Van Buren St., Chicago.
Division III.—Traffic.—J. Gottschalk, 143 Liberty St., New York.
Division IV.—Engineering.—E. H. Fritch, 59 East Van Buren St., Chicago. Annual meeting, March 14-16, 1933, Palmer House, Chicago. Exhibit by National Railway Appliances Association.
Construction and Maintenance Section.—E. H. Fritch, 59 East Van Buren St., Chicago.
Electrical Section.—E. H. Fritch, 59 East Van Buren St., Chicago.
Signal Section.—R. H. C. Balliet, 30 Vesey St., New York.
Division V.—Mechanical.—V. R. Hawthorne, 59 East Van Buren St., Chicago.
Equipment Painting Section.—V. R. Hawthorne, 59 East Van Buren St., Chicago.
Division VI.—Purchases and Stores.—W. J. Farrell, 30 Vesey St., New York.
Division VII.—Freight Claims.—Lewis Pilcher, 59 East Van Buren St., Chicago.
Division VIII.—Motor Transport.—George M. Campbell, 30 Vesey St., New York.
Car Service Division.—C. A. Buch, 17th and H. Sts., N. W., Washington, D. C.

American Railway Bridge and Building Association.—C. A. Lichty, C. & N. W. Ry. 319 N. Waller Ave., Chicago.

American Railway Development Association.—J. A. Senter, Ind. Agt., N. C. & St. L. Ry., Nashville, Tenn.

American Railway Engineering Association.—Works in co-operation with the American Railway Association. Division IV.—E. H. Fritch, 59 East Van Buren St., Chicago, Ill. Annual meeting, March 14-16, 1933, Palmer House, Chicago. Exhibit by National Railway Appliances Association.

American Railway Magazine Editors Association.—Miss E. Kramer, M-K-T Employees Magazine, St. Louis, Mo.

American Railway Tool Foremen's Association.—G. G. Macina, C., M., St. P. & P. R. R., 11402 Calumet Ave., Chicago. Exhibit by Tool Foremen Suppliers' Association.

American Short Line Railroad Association.—R. E. Schindler, Union Trust Bldg., Washington, D. C.

American Society of Mechanical Engineers.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, *Railway Age*, 30 Church St., New York.

American Transit Association.—Guy C. Hecker, 292 Madison Ave., New York.

American Wood Preservers' Association.—H. L. Dawson, 1104 Chandler Building, Washington, D. C. Annual meeting, January 24-26, 1933, Hotel Sherman, Chicago, Ill.

Association of Railway Claim Agents.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul Minn. Annual meeting, June 21, 1933, Chicago, Ill.

Association of Railway Electrical Engineers.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Station, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

Association of Railway Executives.—Stanley J. Strong, Transportation Building, Washington, D. C.

Bridge and Building Supply Men's Association.—S. A. Baber, High Grade Manufacturing Co., 10418 St. Clair Ave., Cleveland, Ohio. Meets with American Railway Bridge and Building Association.

Canadian Railway Club.—C. R. Crook, 2276 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July, and August, Windsor Hotel, Montreal, Que.

Car Department Officers' Association.—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 South Morgan Street, Chicago.

Car Foreman's Association of Chicago.—G. K. Oliver, 2514 W. 55th St., Chicago. Regular meetings, second Monday of each month, except June, July, and August, Auditorium Hotel, Chicago.

Car Foremen's Association of Los Angeles.—J. W. Krause, Room 299, 610 So. Main St., Los Angeles, Cal. Club not active at present time.

Car Foremen's Association of St. Louis, Mo.—J. F. Brady, Main and Barton Sts., St. Louis, Mo. Operation suspended indefinitely.

Central Railway Club of Buffalo.—M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

Cincinnati Railway Club.—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Regular meetings second Tuesday in February, May, September, and November, Hotel Gibson, Cincinnati, O.

Cleveland Railway Club.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Regular meetings second Monday of each month, except June, July and August, Auditorium, Brotherhood of Railroad Trainmen's Building, West 9th St., and Superior Ave., Cleveland.

International Railroad Master Blacksmiths' Association.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

International Railway Congress.—January 19-30, 1933, Heliopolis Palace, Heliopolis, Cairo, Egypt.

International Railway Fuel Association.—T. D. Smith, 1660 Old Colony Building, Chicago.

International Railway General Foremen's Association.—Wm. Hall, 1061 W. Wabasha St., Winona, Minn.

Master Boiler Makers' Association.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

National Association of Railroad and Utilities Commissioners.—James B. Walker, 270 Madison Ave., New York.

National Association of Railroad Tie Producers.—(See Railway Tie Association.).

National Railway Appliances Association.—C. W. Kelly, Suite 322, 910 South Michigan Ave., Chicago. Exhibit during A.R.E.A. Convention, March 13-16, 1933, Coliseum, Chicago.

National Safety Council.—Steam Railroad Section (See Safety Section, American Railway Association).

New England Railroad Club.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Statler, Boston, Mass.

New York Railroad Club.—D. W. Pye, 30 Church St., New York. Regular meetings third Friday of each month, except June, July and August, 29 W. 39th St., New York City.

Pacific Railway Club.—W. S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings second Thursday of each month, alternately in San Francisco and Oakland.

Railway Accounting Officers' Association.—E. R. Woodson, Transportation Building, Washington, D. C.

Railway Business Association.—P. H. Middleton. (Treas. and Asst. Sec.), First National Bank Building, Chicago, Ill.

Railway Club of Pittsburgh.—J. D. Conway, 1841 Oliver Building, Pittsburgh, Pa. Regular meetings, fourth Thursday of each month except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

Railway Electrical Supply Manufacturers Association.—Edward Wray, 9 S. Clinton St., Chicago. Meets with Association of Railway Electrical Engineers.

Railway Fire Protection Association.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Railway Supply Manufacturers' Association.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division Purchases and Stores Division and Motor Transport Division, American Railway Association.

Railway Telegraph and Telephone Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A. Division I.

Railway Tie Association.—Roy M. Edmonds, 1252 Syndicate Trust Bldg., St. Louis, Mo. Annual meeting, May 10-11, 1933, Jefferson Hotel, Richmond, Va.

Railway Treasury Officers Association.—L. W. Cox, 1428 Broad Street Station Building, Philadelphia, Pa.

Roadmasters' and Maintenance of Way Association.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, September 19-21, 1933, Hotel Stevens, Chicago, Ill.

St. Louis Railway Club.—B. W. Frauenthal, Drawer 24, M. P. O., St. Louis, Mo. Meetings temporarily suspended.

Signal Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York. Meets with A. R. A. Signal Section.

Society of Officers, Eastern Associations of Railroad Veterans.—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 7-8, 1933, Scranton, Pa.

Southern and Southwestern Railway Club.—A. T. Miller, 4 Hunter St., S.E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.

Southern Association of Car Service Officers.—R. G. Parks, A. B. & C. R. R., Atlanta, Ga.

Supply Men's Association.—E. H. Hancock, Treasurer, Louisville Varnish Co., Louisville, Ky. Meets with A. R. A. Division V. Equipment Painting Section.

Tool Foremen Suppliers' Association.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.

Toronto Railway Club.—N. A. Walford, P. O. Box 8, Terminal "A," Toronto. Regular meetings first Friday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

Track Supply Association.—L. C. Ryan, Oxweld Railroad Service Co., Carbon & Carbide Building, Chicago. Meets with Roadmasters and Maintenance of Way Association.

Traveling Engineers' Association.—W. O. Thompson, 1177 East 98th St., Cleveland, O.

Western Railway Club.—J. H. Nash, Dri-Steam Valve Sales Corp., 122 S. Michigan Ave., Chicago. Regular meetings third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago.

Equipment and Supplies

FREIGHT CARS

The St. Louis-San Francisco has sold 2,000 unserviceable box cars to the Hyman-Michaels Company, Chicago. The latter company will dismantle the cars.

PASSENGER CARS

The Pennsylvania, at its Altoona shops, is applying motors and control apparatus to 20 MP-54 (suburban type) passenger cars and is also equipping 20 other cars of the same type to operate as trailers for local service on its New York division.

IRON AND STEEL

The Western Pacific has ordered 130 tons of structural steel for overhead bridge work in Utah from the Minneapolis-Moline Power Implement Company.

The Denver & Rio Grande Western has ordered 325 tons of structural steel for a bridge and approaches at Colton, Utah, from the Provo Foundry & Machine Company.

Pennsylvania.—A contract for 125 tons of steel has been let to the McClintic-Marshall Company by the contractor, Brann & Stuart Company, for a bridge at Metuchen, N. J.

Atchison, Topeka & Santa Fe.—The board of directors at a recent meeting authorized the purchase of 26,484 tons of rail; most of this will be of 110-lb. section, with a small tonnage of 130-lb.

The Elgin, Joliet & Eastern has awarded a contract to the American Bridge Company, Chicago, for the fabrication and erection of a 250-ton bridge to carry this company's tracks over a highway near Frankfort, Ill.

Canadian National.—An order was given about two months ago to the Dominion Steel & Coal Corporation, Ltd., Montreal, Canada, for 15,000 tons of rails for the Canadian National lines. Specification for the nature of the rail was only received recently and covered 85-lb. and 100-lb. head free rails.

SIGNALING

The Boston & Maine has petitioned the Interstate Commerce Commission for relief from the requirements of the commission's automatic train control orders requiring it to maintain automatic train control on its line between West Cambridge, Mass., and East Deerfield yard, about 100 miles.

Supply Trade

The Morse Twist Drill & Machine Company, New Bedford, Mass., is now carrying a complete stock of its tools at 570 West Randolph street, Chicago.

Walter J. Church has been appointed district sales representative of the **Morden Frog & Crossing Works,** with headquarters in the Queen & Crescent building, New Orleans, La.

T. F. Carlin has been appointed district sales manager at Washington, D. C., for the **Morden Frog & Crossing Works,** Chicago, with offices at 631 Pennsylvania avenue, N. W.

Richard R. Paradies, until recently railway sales representative of the Arco Company, Cleveland, Ohio, has been appointed manager of the railway department of **Beckwith Chandler Company,** Newark, N. J., manufacturers of paints, varnishes and allied products.

H. Barney Gengenbach, who was for several years connected with the Hale & Kilburn Company, has joined the sales organization of the **Heywood-Wakefield Company,** Boston, Mass. Mr. Gengenbach will be located at the American Furniture Mart, 666 Lake Shore Drive, Chicago.

George E. Doke, formerly president of the **Association of Manufacturers of Chilled Car Wheels,** has, at his own request, been relieved of active duty and granted an indefinite leave of absence. **H. C. Van Buskirk** has been appointed executive vice-president in charge of the affairs of the association.

The American Rolling Mill Company, Middletown, Ohio, has acquired the properties of the **Lake Erie Steel & Blanking Company,** Cleveland, Ohio. **M. S. Phillips,** assistant to the general manager of sales of The American Rolling Mill Company, has been elected president and general manager of the Lake Erie Steel & Blanking Company.

The Bethlehem Steel Company has made a change in its organization as a further step toward a unified sales organization; the department of railway cars and machinery, **G. W. Struble** in charge, is now a part of the general sales department, reporting to **Paul Mackall,** vice-president. Mr. Struble, as assistant to vice-president, will continue to be active in the sale of products which he has been handling and in addition thereto will assume further duties assigned to him in the consolidated sales department.

Harold A. Brainerd, contracting manager of the **American Bridge Company** in charge of the Baltimore, Md., office has been appointed assistant general contracting manager with office in the Frick building, Pittsburgh, Pa. Mr. Brainerd has been continuously in the service of this company since his graduation from Cornell University having served successively as detailer, designing engineer, assistant contracting manager and for the past several years as contracting manager at Baltimore. **Eugene Mowlds, Jr.,** succeeds Mr. Brainerd as contracting manager of the Baltimore office. Mr. Mowlds is a graduate of the University of Cincinnati and for the past 5½ years has been assistant to Mr. Brainerd at Baltimore.

The Frigidaire Corporation, Dayton, Ohio, refrigeration subsidiary of **General Motors,** has entered the railway-equipment field with the introduction of complete air-conditioning equipment for sleeping cars, club and observation cars, diners and day coaches. The new air-conditioning equipment, according to E. G. Biechler, president and general manager, is a joint development of the General Motors Research Laboratories in Detroit, Mich., and Frigidaire's Engineering Division in Dayton. A separate factory division has been established in Dayton for the new sales and engineering. This unit will be known as the Railway Air-Conditioning Division. **R. E. Robillard,** air-conditioning application engineer, heads the division as railway contract representative. The research and engineering activity is in charge of **C. F. Henney,** a member of the staff of E. B. Newill, vice-president in charge of engineering of the Frigidaire Corporation.

R. E. Robillard

W. E. Crocombe, president of the **American Forge Company,** has also been elected president of the **American Manganese Steel Company,** Chicago Heights, Ill., to succeed **Wesley G. Nichols,** retired. In 1885, Mr. Nichols entered the employ of the Glasgow Iron Works, Pottstown, Pa., and two years later became associated with the Chester Rolling Mill Company, Chester, Pa. In 1896, he entered the employ of the Taylor Iron & Steel Company, High Bridge, N. J., and when in 1905, the American Brake Shoe & Foundry Company undertook the manufacture of manganese steel at Chicago Heights, Ill., Mr. Nichols organized the operating department of that business. He continued in direct charge of operations for 15 years, and shortly after when the Edgar Allen American Manganese Steel Company was organized in 1910 to handle the manganese steel business, he was elected vice-president. In 1915, this company became the American Manganese Steel Company, a subsidiary of the American Brake Shoe & Foundry Company, and in 1920, Mr. Nichols was elected president, which position he has held until his retirement.

Charles F. Blackmer, vice-president at Cleveland, Ohio, of the **American Steel & Wire Company,** a subsidiary of the **United States Steel Corporation,** will succeed **John S. Keefe** as president of the American Steel & Wire Company on January 1, Mr. Keefe having requested that he be relieved of his duties on that date, retiring under the corporation's pension plan. Mr. Blackmer was born on April 1, 1878 at Worcester, Mass. On July 1, 1898, he became an assistant in the laboratory of the Washburn & Moen Wire Company, Waukegan, Ill.; when that company was taken over in 1899 by the American Steel & Wire Company, he served as a foreman in the tinning department of the Waukegan plant, continuing in that capacity after that company became a subsidiary of the United States Steel Corporation in 1900 and in 1912 he was appointed assistant superintendent of the same plant. When the Minnesota Steel Company was projected as a subsidiary of the United States Steel Corporation, Mr. Blackmer was sent to Duluth, Minn., to design, build and put in operation its wire mills and on their completion in June, 1921, was made superintendent of those mills. In 1925, Mr. Blackmer was transferred to Pittsburgh as district

Charles F. Blackmer

John S. Keefe

Continued on next left-hand page

manager of the American Steel & Wire Company. He remained there until January, 1928, and then was appointed general superintendent of all wire mills of the company with headquarters at Cleveland. In April, 1930, he became vice-president in charge of operation.

John S. Keefe, who will retire from the presidency of the American Steel & Wire Company on January 1, was born on January 24, 1864, at Boston, Mass. He moved to the mid-west at an early age and when 13 became an office boy with the Chicago & North Western. He left the railroad in 1888 to become traffic manager for the Illinois Steel Company, now a part of the United States Steel Corporation. In 1899, he was made general traffic manager of the American Steel & Wire Company and in 1901 became a director and first vice-president of that company. He was promoted to president in December, 1927.

Construction

Chicago, Burlington & Quincy.—A contract has been awarded by this road to J. Albin Nelson, Burlington, Iowa, for the construction of a one-story frame and brick office building, 25 ft. by 47 ft., with a concrete foundation, at Burlington, for lease to the Trans-Mississippi Grain Company.

Coos Bay Southern.—This Company has applied to the Interstate Commerce Commission for a certificate authorizing the construction of an extension from North Bend, Ore., to the plant of the Sitka Spruce Company, 5.5 miles.

Delaware & Hudson.—The Public Service Commission of New York has approved a bid submitted by the Moore Construction Company, Inc., Buffalo, N. Y., for elimination of the Pony Farm, Crandall and West Oneonta Road grade crossings of the D. & H. in Oneonta, N. Y., and Otego.

Erie.—This company has received approval from the New York Public Service Commission of a bid submitted by I. M. Ludington's Sons, Inc., Rochester, N. Y., for elimination of the Paterson grade crossing, located two miles west of Painted Post station, Erwin, N. Y.

Public Service Commission of New York.—The New York Public Service Commission has approved specifications and cost estimates for the reconstruction of the highway bridge carrying Union and John streets over the tracks of the New York Central in Poughkeepsie, N. Y. The commission has also ordered the reconstruction of a bridge carrying the Canton-Potsdam state highway over the New York Central in Potsdam, N. Y.; has reaffirmed its order for reconstruction of the railroad bridge carrying the same company's Harlem division tracks over a state highway at Croton Falls, N. Y.; and has reopened proceedings for reconstruction of the bridges carrying the Erie and Lehigh Valley tracks over the Waverly-Owego state highway in Owego, N. Y.

Financial

Akron, Canton & Youngstown.—*Excess Income Report.*—Division 1 of the Interstate Commerce Commission has issued a tentative recapture report finding that this company in the years 1922 to 1927, inclusive, earned excess income amounting to $820,486, of which one-half would be recapturable. This finding is made after certain readjustments of the reported net railway operating income, including amounts ranging from $12,071 for 1922 to $56,659 for 1927 added as representing increases in the compensation paid general officers and bonuses to employees for which the commissioners failed to find justification. The report states that the total of salary payments to general officers was increased from $51,690 in 1920 to $97,141 in 1926, and that in addition $40,000 was paid to the president of the road in 1924 which was reported as salary for the period January 1, 1919, to March 1, 1921. This amount was also added to the net railway operating income in addition to other readjustments.

Alabama Central.— *R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $7,500.

Atchison, Topeka & Santa Fe.—*Abandonment.*—The Interstate Commerce Commission has authorized this company and the California, Arizona & Santa Fe to abandon the line of the former company extending from Cordes, Ariz., to Middelton, 10.4 miles.

Central of New Jersey.—*Bonds.*—The Interstate Commerce Commission has authorized this company to issue $1,074,000 of general mortgage 5 per cent bonds to be pledged as collateral security for short term notes.

Chicago & North Western.—*Equipment Trust Certificates.*—The Interstate Commerce Commission has authorized this company to pledge $748,000 of its equipment trust of 1920, series L, certificates and $240,000 of Chicago, St. Paul, Minneapolis & Omaha equipment trust of 1928, series I, certificates or its equity therein, as collateral security for notes, the pledge to be subsequent to that of these certificates to the Reconstruction Finance Corporation.

Chicago, Milwaukee, St. Paul & Pacific.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Midland Junction, Minn., to Zumbro Falls, 35.5 miles.

Chicago, Rock Island & Pacific.—*Proposes To Guarantee Bonds of Subsidiaries.*—This company has applied to the Interstate Commerce Commission for authority to assume obligation and liability as guarantor, in connection with its proposed consolidation of subsidiary lines for which it had previously asked authority, in respect of $83,984,480 of funded debt of the various companies, of which $31,300,480 is outstanding in the hands of the public and $52,684,000 is owned by the Rock Island.

Chicago, St. Paul, Minneapolis & Omaha.—*Abandonment.*—Examiner R. R. Molster of the Interstate Commerce Commission has recommended in a proposed report that the commission authorize the abandonment of this company's Wynot branch, from Coburn, Neb., to Wynot, 45.39 miles.

Delaware, Lackawanna & Western.—*Correction.*—In the *Railway Age* of November 26 it was stated that the Interstate Commerce Commission had authorized this company to issue and renew $1,568,000 of notes and to pledge as collateral therefor $6,339,000 of its first and refunding 5 per cent, series A bonds. Actually, the collateral provision was that such part of this total of bonds, which the road has in its treasury, be pledged as would be necessary to maintain a ratio of $125 of bonds (market value) for each $100 of notes (face value).

Denver & Rio Grande Western.—*Operation.* — The Interstate Commerce Commission has authorized this company to operate the proposed Denver & Salt Lake Western from a connection with its line at Dotsero, Colo., northeasterly to Orestod, 39 miles, and to operate under trackage rights over the Denver & Salt Lake from Orestod easterly to Utah Junction, near Denver, 129 miles.

Erie.—*Bonds.*—The Interstate Commerce Commission has authorized this company to procure the authentication and delivery of $5,000,000 of 6 per cent refunding and improvement mortgage 6 per cent bonds, series of 1932, in partial reimbursement for capital expenditures; to pledge these bonds with the Reconstruction Finance Corporation as collateral security for loans; and to pledge its further equity therein with the Railroad Credit Corporation.

Gulf, Mobile & Northern.—*Bonds.*—The Interstate Commerce Commission has authorized this company to pledge as collateral security for loans with the Railroad Credit Corporation its equity in $900,000 of its first mortgage, series C bonds, now pledged with the Reconstruction Finance Corporation.

Lake Superior & Ishpeming.—*Excess Income Report.*—Division 1 of the Interstate Commerce Commission has issued a tentative recapture report finding that this company in the period from 1920 to 1927 earned $476,456 in excess of 6 per cent on its valuation, of which one-half would be recapturable.

Louisville & Nashville. — *Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon a line extending from Florala, Ala., to Lakewood, Fla., 3 miles.

Louisville & Nashville.—*Bonds.*—The Interstate Commerce Commission has authorized this company to procure the authentication and delivery of $6,562,000 of first and refunding mortgage 4½ per cent, series C bonds in partial reimbursement for additions and betterments and for retiring underlying bonds.

Continued on next left-hand page

NEW ORLEANS PUBLIC BELT. — *Bridge Bonds.*—The Interstate Commerce Commission has authorized the city of New Orleans to issue 5 per cent bonds totaling $7,000,000 to be sold at not less than par and the proceeds used to construct a bridge, and approaches thereto, over the Mississippi river.

NEW ORLEANS PUBLIC BELT.—*R. F. C. Loan.*—The Interstate Commerce Commission on November 29 approved a loan of $6,000,000 from the Reconstruction Finance Corporation to the city of New Orleans for the purpose of financing in part the construction of a publicly owned bridge across the Mississippi river at New Orleans as an extension of the line of the New Orleans Public Belt Railroad at a cost of $13,000,000. The Finance Corporation is to effect the loan by purchasing city 5 per cent bonds, of which the commission has authorized an issue of $7,000,000, and also $7,000,000 of state bonds.

NEW YORK CENTRAL.—*Commercial Value of Boyne City, Gaylord & Alpena.*—Examiner J. V. Walsh of the Interstate Commerce Commission has recommended in a proposed report that the commission find that the commercial value of the property of the Boyne City, Gaylord & Alpena is $75,000, instead of $230,000 as formerly determined by the commission. This road is one of the properties which the commission required the New York Central to offer to acquire as one of the conditions of its approval of the lease of the Michigan Central and the Cleveland, Cincinnati, Chicago & St. Louis. After the original finding as to the commercial value the New York Central asked a rehearing and contended that the commercial value was not in excess of $1; also that public convenience and necessity will not justify the expenditure of the sum required to reconstruct and rehabilitate the road. The examiner also recommends a finding that compliance by the N. Y. C. with the conditions would require an offer of the $75,000 but that entry of an order should be deferred pending acceptance of the terms of such an offer by the Alpena.

NEW YORK, CHICAGO & ST. LOUIS.—*R. F. C. Loan.*—This company has filed with the Interstate Commerce Commission and the Reconstruction Finance Corporation a supplemental application asking that the loan of $5,600,000 conditionally approved by the commission to enable it to pay 25 per cent in cash to the holders of its 20-year notes that matured on October 1 be made immediately available. The loan was approved on condition that substantially all of the noteholders accepted the plan. The application said that 82 per cent had accepted and that it was believed that more would do so if the loan were actually made.

NEW YORK, ONTARIO & WESTERN.—*Equipment Trust Certificates.*—The Interstate Commerce Commission has authorized this company to assume obligation and liability by means of an agreement and sub-lease dated October 25, 1932, for $291,500 of equipment trust certificates of the Pennsylvania Coal & Coke Corporation, series A. This is an agreement whereby the railroad has leased 500 steel hopper cars from the Coal Company, its payments to be $21,000 in cash and $26,500 in eleven semi-annual installments beginning November 15 last, these payments being equivalent to one-half the amount of the equipment trust certificates maturing on those dates. In addition the railroad will pay the taxes levied against these cars. At the termination of the sub-lease and after all its obligations have been met, title to the equipment will be transferred to the railroad.

READING. — *Equipment Trust.* — Dillon, Read & Co. has offered $1,800,000 of this company's 5 per cent, series N, equipment trust certificates, priced to yield from 4 to 4.6 per cent.

SIEVERN & KNOXVILLE.—*Receivership.*—E. B. Cantey, Columbia, S. C., has been named receiver of this company by the federal court for the eastern district of South Carolina.

SOUTHERN PACIFIC. — *Acquisition and Bonds.*—The Interstate Commerce Commission has authorized this company to issue $2,656,000 of its Oregon Lines first mortgage, series A, bonds in partial reimbursement for capital expenditures, the issue to be pledged as collateral security for short term notes.

WABASH.—*R. F. C. Loan.*—The Interstate Commerce Commission has approved an additional loan of $1,500,000 to the receivers from the Reconstruction Finance Corporation for the purpose of paying equipment obligations.

Dividends Declared

Albany & Susquehanna.—$4.50, semi-annually, payable January 1 to holders of record December 15.

Atchison, Topeka & Santa Fe.—Preferred, $2.50, semi-annually, payable February 1 to holders of record December 30.

Atlanta Birmingham & Coast.—5 Per Cent Preferred, 2½ per cent, semi-annually, payable January 1.

Carolina Clinchfield & Ohio.—Common, $1, quarterly; guaranteed certificates, quarterly, $1.25, both payable January 10 to holders of record December 31.

Chicago, Burlington & Quincy.—Dividend action deferred.

Cincinnati Union Terminal.—5 Per Cent Preferred, 1¼ per cent, quarterly, payable December 31 to holders of record December 21.

Cleveland, Cincinnati, Chicago & St. Louis.—$5, semi-annually; 5 per cent preferred, 1¼ per cent, quarterly, both payable January 31.

Colorado & Southern.—Second preferred, dividend omitted.

Dayton & Michigan.—Preferred, $1, quarterly, payable January 3.

Erie & Pittsburgh.—87½c, payable December 10 to holders of record November 30.

Kansas, Oklahoma & Gulf.—Ser. C. Non-cumulative Preferred dividend omitted.

Lackawanna Railroad of New Jersey.—4 Per Cent Guaranteed, $1.00, quarterly, payable January 3 to holders of record December 9.

New York & Harlem.—Preferred, $2.50, semi-annually; $2.50, semi-annually both payable January 1 to holders of record December 15.

Northern Central.—$2, semi-annually, payable January 15.

Old Colony.—$1.75, quarterly, payable January 3 to holders of record December 17.

Reading Company. — Second preferred, 50c, quarterly, payable January 12 to holders of record December 22.

Average Prices of Stocks and of Bonds

	Dec. 6	Last week	Last year
Average price of 20 representative railway stocks..	24.20	23.51	33.78
Average price of 20 representative railway bonds...	55.61	56.86	67.38

Railway Officers

EXECUTIVE

C. W. Michel, vice-president at New York for the St. Louis-San Francisco, has been appointed receiver's agent at that point.

Robert Harrison, general attorney of the Chicago, Rock Island & Gulf, has been elected vice-president and general solicitor, with headquarters as before at Ft. Worth, Tex., to succeed **N. H. Lassiter,** who has retired.

Harry A. Worcester, resident vice-president of the New York Central, with headquarters at Cincinnati, Ohio, retired on November 30. Mr. Worcester will continue as president of the Cincinnati Union Terminal Company.

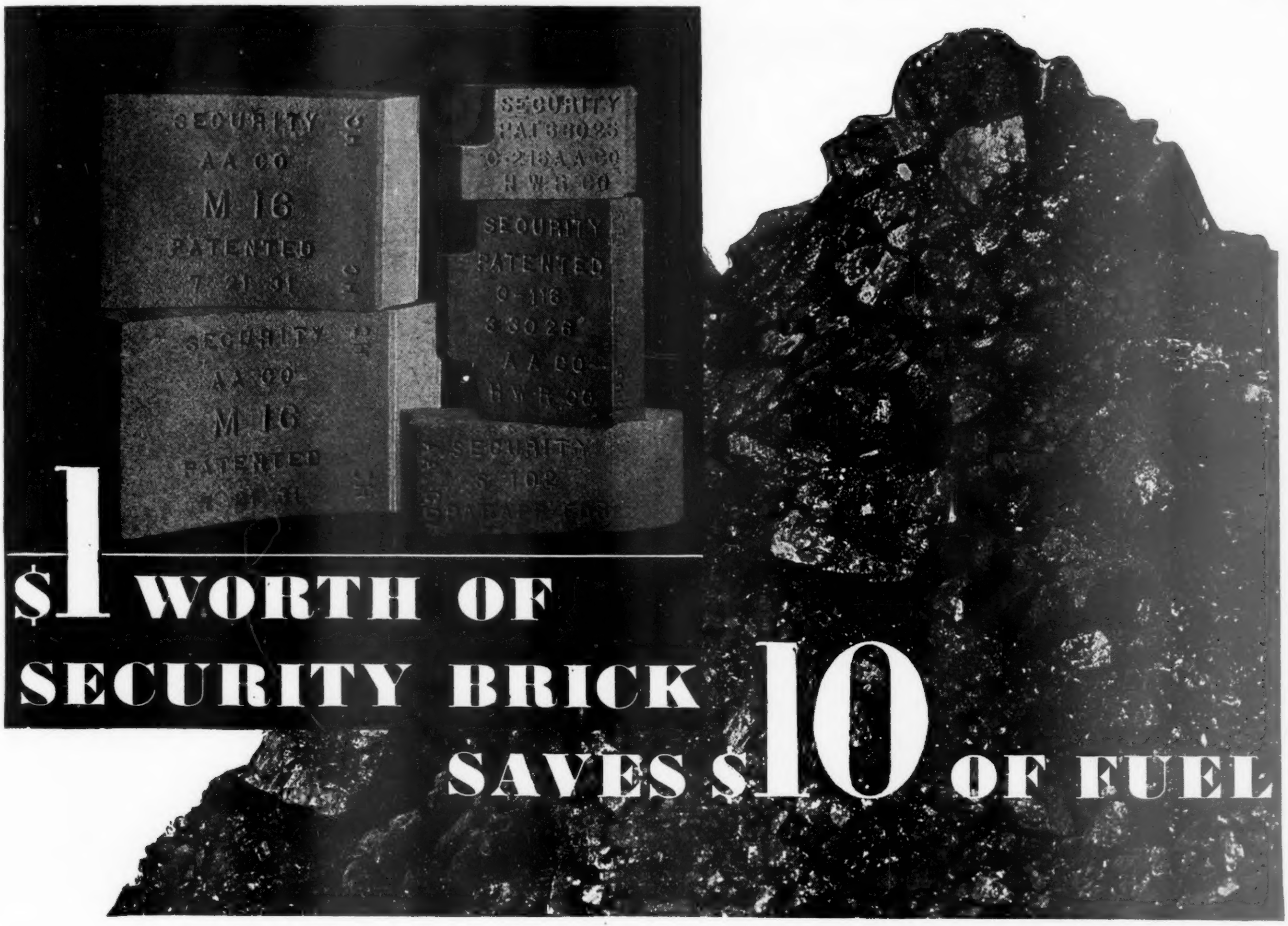
G. C. Ward, vice-president of the San Joaquin & Eastern, has been elected president with headquarters as before at Los Angeles, Cal., succeeding **R. H. Ballard. Harry J. Bauer** has been elected vice-president to succeed Mr. Ward.

John G. Lonsdale, president of the Mercantile-Commerce Bank & Trust Company, St. Louis, Mo., whose appointment as co-receiver of the St. Louis-San Francisco was noted in the *Railway Age* of November 12, has taken an active interest in the financial aspects of transportation matters for many years. At the age of 22 years Mr. Lonsdale acted as receiver for the Little Rock, Hot Springs & Texas.

John G. Lonsdale

In addition, he has served as a director of a number of railroads and as a member of various transportation committees of the United States Chamber of Commerce and of the American Bankers' Association. He was born on April 4, 1872, at Memphis, Tenn., and entered the real estate

Continued on next left-hand page



● only a complete arch can give the maximum economy

IN the battle against operating expense, withholding of a dollar for Arch brick may mean losing ten dollars in fuel.

Arch economy is thoroughly proved. But only a complete Arch with every course and every individual Arch brick in place can produce the full economy.

Cutting off a course of Arch brick in an effort to reduce expenses will ordinarily waste ten dollars in fuel for each dollar saved in Arch brick—net loss nine dollars.

True economy lies in making the money-savers like the locomotive Arch work at their maximum efficiency.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.
Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
Locomotive Combustion Specialists

business at Hot Springs, Ark., in 1891. Later he entered the stock brokerage business in his own name at New York and Hot Springs, and subsequently became a member of Logan & Bryan, stock brokers at New York. He resigned from the latter position in 1915 to become president of the National Bank of Commerce of St. Louis, which position he held until May 20, 1929, when this bank merged with the Mercantile Trust Company, forming the Mercantile-Commerce Bank & Trust Company, of which he became president. In his capacity as co-receiver of the Frisco, Mr. Lonsdale has charge of all matters except actual operation.

FINANCIAL, LEGAL AND ACCOUNTING

Thomas P. Healy has been appointed associate general counsel for the New York Central, following the death of **Clyde Brown,** formerly general solicitor.

OPERATING

P. W. Conley, superintendent of the St. Louis (Mo.) terminals of the St. Louis-San Francisco since 1906, retired on November 28 after almost 56 years of railroad service, and **M. M. Sisson,** superintendent of the Eastern division, with headquarters at Springfield, Mo., has had his jurisdiction extended to include the St. Louis terminals.

A. Halkett, general superintendent of the Alberta district of the Canadian Pacific, with headquarters at Calgary, Alta., has been transferred to the Manitoba district, with headquarters at Winnipeg, Man., succeeding **E. D. Cotterell,** who has been transferred to the Saskatchewan district, at Moose Jaw, Sask. Mr. Cotterell replaces **W. A. Mather,** who in turn has been transferred to the Alberta district, at Calgary, to succeed Mr. Halkett.

James R. Branley, superintendent of the Gladstone division of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Gladstone, Mich., has been transferred to the Minnesota division, with headquarters at Enderlin, N. D., succeeding **August H. Mann,** who has been assigned to other duties; the jurisdiction of **Clinton B. Wilson,** superintendent of the Twin City Terminal division, with headquarters at Minneapolis, Minn., has been extended to include the Gladstone division. **Harold A. Sparks,** a trainmaster, has been appointed to the newly-created position of assistant superintendent of the Twin City Terminal and Gladstone divisions, with headquarters at Gladstone.

TRAFFIC

Thomas G. Kees, assistant general agent for the Chicago Great Western, at Chicago, has been promoted to the newly-created position of general agent at Des Moines, Iowa.

W. H. Billings, general agent for the New York, Ontario & Western at St. Louis, Mo., has been appointed to the newly-created position of general agent at Cleveland, Ohio.

F. X. Bell, traveling freight agent for the Wabash at Los Angeles, Cal., has been promoted to general agent, freight department, at San Francisco, Cal., succeeding **W. N. Price,** deceased.

E. A. Klippel, Jr., city passenger agent at Portland, Ore., for the Union Pacific, has been promoted to assistant general passenger agent on the Oregon Short Line at Salt Lake City, Utah, to succeed **C. W. Price,** deceased.

J. S. Collar, assistant manager of mail, baggage and express traffic of the Illinois Central, has been promoted to manager of mail, baggage and express traffic, with headquarters as before at Chicago, to succeed **H. T. Coleman,** deceased.

Charles E. Hall, assistant western traffic manager of the Delaware, Lackawanna & Western, with headquarters at Chicago, has been promoted to western traffic manager, with the same headquarters, to succeed **Harry J. Graham,** deceased.

C. C. P. Rausch, assistant freight traffic manager in charge of Interstate Commerce Commission work for the Missouri Pacific, who retired on November 16, as noted in the *Railway Age* for November 26, had been connected with the traffic department of the Missouri Pacific continuously for 44 years. He was born on September 24, 1872, at St. Louis, Mo., and entered railway service in July, 1888, as an office boy on the Missouri Pacific and the St. Louis, Iron Mountain & Southern (part of the Missouri Pacific), serving until March, 1906, as clerk, rate clerk, chief tariff clerk and chief clerk. At that time he was promoted to assistant general freight agent, with headquarters at St. Louis, which position he held until May, 1915, when he was further advanced to general freight agent at that place. In June, 1917, Mr. Rausch was promoted to assistant freight traffic manager at St. Louis, which position he occupied until his recent retirement.

MECHANICAL

John Kyle, who has been appointed general superintendent of motive power and car equipment of the Western region of the Canadian National, with headquarters at Winnipeg, Man., as noted in the *Railway Age* of October 8, has served in the mechanical departments of several railways in Canada for nearly 40 years. He was born on April 11, 1878, at Toronto, Ont., and after receiving his education in the public and technical schools at Toronto, he entered railway service in 1893, as a mechanical apprentice on the Grand Trunk (now part of the Canadian National). He left this company in 1899 to go with the Canadian Pacific as a machinist at Winnipeg, being appointed leading hand and shop foreman at the Winnipeg enginehouse two years later. In February, 1903, Mr. Kyle entered the service of the Canadian Northern (now part of the Canadian National), as general foreman at Winnipeg, being advanced to assistant master mechanic at that place on October 1, 1907. He was further promoted to master mechanic, with headquarters at Edmonton, Alta., on January 1, 1912, which position he held until March 1, 1923, when he was advanced to superintendent of motive power and car equipment at Edmonton. Mr. Kyle held the latter position until his recent appointment as general superintendent of motive power and car equipment of the Western region.

OBITUARY

William M. Corbett, president of the Kansas City Terminal, at Kansas City, Mo., died at that place on November 27.

George H. Lee, formerly general passenger agent of the Lehigh Valley, with headquarters at New York, died on November 26, at his home in Westfield, N. J.

J. D. Noriega, traffic manager of the National Railways of Mexico, with headquarters at Mexico, D. F., died at San Antonio, Tex., on November 26.

John T. Huffman, master mechanic of the Delray Connecting Railroad Company at Detroit, Mich., died suddenly on March 21, from injuries received in an automobile accident.

J. A. Bevis, general agent, freight department, for the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Cincinnati, Ohio, died suddenly on November 22.

J. S. Adsit, general southwestern agent of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Kansas City, Mo., died on December 3, at the age of 66 years, after an illness of several months.

Dean L. Brooks, for the past 21 years general secretary of the Pittsburgh & Lake Erie Railroad Y. M. C. A. at Campbell, Ohio, died of a cerebral hemorrhage on December 2, following a week's illness. Mr. Brooks was 51 years old.

William H. Fisher, formerly vice-president and general manager of the Duluth & Winnipeg (now part of the Great Northern), who retired from railway service in 1897, died on November 29 at his home at St. Paul, Minn., at the age of 87 years.

J. H. Sanford, formerly purchasing agent of the New York, New Haven & Hartford, died on November 7, following an operation. Mr. Sanford was born on September 8, 1871, and entered railroad service in the purchasing department of the New York, New Haven & Hartford in 1888. He was appointed purchasing agent in September 15, 1914, and served in that capacity until he resigned in May, 1925.

James A. Bowdoin, district superintendent of the Atlantic Coast Line, with headquarters at Montgomery, Ala., died on November 30, of injuries received in an automobile accident. Mr. Bowdoin was born at Deatsville, Ala., on November 19, 1868, and commenced his railroad career on January 1, 1888, as brakeman of

Continued on next left-hand page

the Northwestern & Florida (now a part of the A.C.L.). He subsequently served as conductor, trainmaster and assistant superintendent. In May, 1915, he was appointed district superintendent, the position he held until his death.

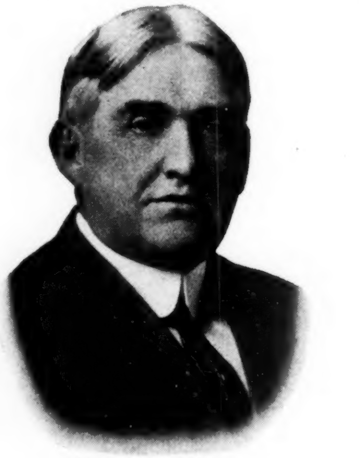
Homer L. Hungerford, assistant general superintendent of transportation of the Southern, with headquarters at Charlotte, N. C., died suddenly at Washington, D. C., on November 29, while on his way to a hearing before the Interstate Commerce Commission. Mr. Hungerford was born at Dowagiac, Mich., on November 16, 1867, and entered railway service in April, 1884, as telegraph operator with the Michigan Central. He entered the service of the Southern in 1907, as division superintendent. Subsequently he served as general superintendent, division superintendent, superintendent of transportation, and assistant general superintendent, the position he held at the time of his death.

H. McCourt, formerly general superintendent of the Southern lines of the Illinois Central, with headquarters at Memphis, Tenn., who resigned from railway service in 1911 to engage in other business, died on November 29 at Memphis. Mr. McCourt's railway experience, all of which was with the Illinois Central, extended over a period of 30 years. He entered the service of that company as a brakeman and served consecutively as a freight conductor, agent, yardmaster, trainmaster and superintendent, holding the latter position on the Amboy, St. Louis and Chicago divisions. In 1903 he was advanced to assistant general superintendent, and two years later he was made general superintendent of the Southern lines, which position he held until his resignation in 1911.

Clyde Brown, general solicitor for the New York Central Lines, died at his home in Westport, Conn., on November 30, following a three months' illness. Mr. Brown was born on March 17, 1873, at McConnellsville, Ohio, and received his education at Ohio University, from which he was graduated in 1895. He entered the service of the New York Central on April 1, 1907, and on January 1, 1908, he was appointed general solicitor for the New York Central Railroad. Two years later his jurisdiction was extended to include all of the New York Central Lines, which position he held until his death. Mr. Brown represented the New York Central in the four-party consolidation plan for Eastern railroads before the Interstate Commerce Commission, and acted as chairman of the legal committee for all Eastern railroads in the 15 per cent rate increase case before the commission. He also took a leading part in the Pullman surcharge case, and the 40 per cent freight rate case in 1920.

Clyde Brown

Harry J. Graham, western traffic manager of the Delaware, Lackawanna & Western at Chicago, whose death, on November 22, was noted in the *Railway Age* of November 26, had a record of many years of service in the traffic departments of various railroads. He was born on May 26, 1859, at New Lisbon, Ohio, and entered railway service as secretary for the receivers of the Illinois Midland, at Terre Haute, Ind. Later he served as chief clerk to the general freight agent of the Peoria, Decatur & Evansville (now part of the Illinois Central), at Peoria, Ill., and then as general agent for the Lake Erie & Western (now part of the New York, Chicago & St. Louis), at the same place. Subsequently he was advanced to assistant general freight agent for the latter road at Indianapolis, Ind., leaving this railroad in 1900 to become manager at Chicago for the Delaware, Lackawanna & Western. During federal control of the railroads Mr. Graham served on the staff of the regional director of the Eastern region of the United States Railroad Administration, and in March, 1920, following the termination of government control, he was appointed general western freight agent for the Lackawanna, at Chicago. On April 1, 1928, he was given the title of western traffic manager at the same place, which position he continued to hold until his death.



Harry J. Graham

Ransom M. Calkins, executive assistant on the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, and formerly vice-president in charge of traffic of this railroad, died suddenly on December 4, at Daytona Beach, Fla., at the age of 69 years. Mr. Calkins had been associated with the Milwaukee in various capacities for 53 years. He was born on August 12, 1863, at Ogdensburg, N. Y., and entered railway service in 1879 as a clerk and telegraph operator on the Milwaukee at Monticello, Iowa. From 1881 to June, 1892, he served as local agent at various points. During the following four years he was agent at Kansas City, Mo., and from June, 1896, to June, 1898, he was division freight and passenger agent at Mason City, Iowa. At the end of this period he became general freight and passenger agent of the Des Moines, Northern & Western (part of the Milwaukee), at Des Moines, Iowa, being appointed assistant general freight agent on the Milwaukee at Chicago in February, 1899. Ten years later Mr. Calkins became general freight and passenger agent of the Chicago, Milwaukee & Puget Sound and the Montana (units of the Milwaukee), with headquarters at Butte, Mont., and in June of the following year he was appointed traffic manager of the C. M. & P. S. From January 1, 1913, to December 15, 1917, he was traffic manager of the Puget Sound Lines of the Milwaukee, with headquarters at Butte, Mont., and in June of the following year he was appdent in charge of traffic for the entire system, with headquarters at Chicago. When the Milwaukee was placed under federal control during the war, Mr. Calkins was appointed traffic manager, but resigned in August, 1918, to engage in shipbuilding at Puget Sound. On October 15, 1918, he was elected corporate president of the Milwaukee, with headquarters at Chicago, which position he held until November, 1919, when he was re-elected vice-president in charge of traffic. When the Milwaukee was placed in receivership in 1925, Mr. Calkins became chief traffic officer, being appointed executive assistant the following year, which position he continued to hold until his death.

Ransom M. Calkins

Courier Service to interesting points in Old Mexico and Southwestern United States, in charge of young society women, has been made an added feature for passengers on the Golden State Limited of the Chicago, Rock Island & Pacific and Southern Pacific. These girls, as hostesses, meet the train at El Paso, Tex., and escort the travelers into Mexico and other sections of the border states where entertainment is provided. The couriers are uniformed and each has special credentials from the Mexican government.